Inclusion Policy Lab: Evaluation Results

Ayuntamiento de Santander – Inclusion through responsible participation

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MINISTERIO DE INCLUSIÓN, SEGURIDAD SOCIAL Y MIGRACIONES
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The General Secretariat of Inclusion of the Ministry of Inclusion, Social Security, and Migration has prepared this report within the framework of the Inclusion Policy Lab, as part of the Recovery, Transformation, and Resilience Plan (RTRP). It has been funded by the Next Generation EU funds. The Santander City Council has collaborated in the elaboration of this report as the entity responsible for implementing the project. This entity is one of the implementers of the pilot projects and has collaborated with the General Secretariat of Inclusion in the design of the RCT methodology, actively participating in the provision of the necessary information for the design, monitoring, and evaluation of the social inclusion itinerary. Furthermore, their collaboration has been essential to gathering informed consents, ensuring that participants in the itinerary were adequately informed and that their participation was voluntary.

A research team coordinated by CEMFI (Center for Monetary and Financial Studies) has substantially contributed to this study. Specifically, Yarine Fawaz, researcher at CEMFI; Ana García-Hernández, Policy and Research Manager at J-PAL Europe; Mónica Martínez-Bravo, General Secretary of Inclusion and professor at CEMFI (on leave of absence); Pablo Montero Lomas, public policy analyst at Tragsa and Inés Torres Rojas, policy-and research associate CEMFI, J-PAL Europe, under the coordination of Mónica Martínez-Bravo (until January 8, 2024) and Samuel Bentolila, professors at CEMFI. The researchers have been actively involved in all phases of the project, including the adaptation of the initial proposal to the needs of the evaluation through randomized experiments, the design of the evaluation, the design of measurement instruments, the processing of the data and the realization of the econometric estimates that result in the quantitative results.

The partnership with J-PAL Europe has played a vital role in the efforts of the General Secretariat of Inclusion to improve social inclusion in Spain. Their team has provided technical support and shared international experience, assisting the General Secretariat in the comprehensive evaluation of pilot programs. Throughout this partnership, J-PAL Europe consistently demonstrated a commitment to fostering evidence-based policy adoption, integrating empirical data into strategies that promote inclusion and progress within our society.

This evaluation report has been produced using the data available at the time of its writing and is based on the knowledge acquired about the project up to that date. The researchers reserve the right to clarify, modify or delve into the results presented in this report in future publications. These potential variations could be based on the availability of additional data, advances in evaluation methodologies or the emergence of new information related to the project that may affect the interpretation of the results. The researcher is committed to continuing exploring and providing more accurate and updated results for the benefit of the scientific community and society in general.

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Executive Summary

- The **Minimum Income Scheme,** established in May 2020, is a minimum income policy that aims to ensure a minimum income to vulnerable groups and provide ways to promote their social and labor integration.
- Within the framework of this policy, the Ministry of Inclusion, Social Security and Migration (MISSM) fosters a strategy to promote inclusion through pilot projects of social innovation, which is conducted in the **Inclusion Policy Lab**. These projects are evaluated according to the standards of scientific rigor and using the methodology of Randomized Controlled Trials.
- This document presents the evaluation results and main findings of the project "Inclusion from responsible participation", which has been carried out in **cooperation between the MISSM and the Santander City Council**.
- This study assesses the efficacy of an intervention involving tailored training and company internships in contrast to a conventional intervention model. To achieve this, four distinct experimental groups were defined. Treatment Group 1 (T1) underwent individualized coaching sessions designed to enhance self-esteem and personal empowerment. Treatment Group 2 (T2) engaged in professional training and corporate internships tailored to three distinct occupational profiles. Treatment Group 3 (T3) underwent a hybrid intervention comprising both personal coaching and professional training alongside internships. The control group remained unexposed to any intervention.
- The project was conducted within the **Santander City Council** and encompassed a cohort of 365 participants. Specifically, there were 73 individuals in the Treatment 1 group, 47 participants in the Treatment 2 group, 68 members in the Treatment 3 group, and 177 subjects comprising the control group.
- On average, project participants were 46 years old, with a gender distribution of 64% women and 36% men. Notably, 83% of the participants were unemployed at the time they completed the baseline questionnaire. Regarding educational attainment, 4% had not completed any level of education, 24% had completed primary education, and another 24% had completed secondary education. Furthermore, participants demonstrated positive scores across most outcome indicators, except for the Founded Optimism sub-index, the ICBE sub-scale, and the Frequency sub-index.
- The level of participant engagement in the support activities reached 98.7% for the treatment group, indicating consistent attendance at both evaluations and training sessions. Meanwhile, the control group demonstrated full participation, with a 100% attendance rate during the final data collection phase.
- The main results of the evaluation are as follows:
    - **Treatment improves self-esteem and personal empowerment:** the treatment group undergoing professional training experiences a significant 7% improvement in the

resilience index (Connor-Davidson) compared to the control group. This effect is statistically significant at the 5% level.

- **Improved employability:** the employability rate increases by 4.73% when participants undergo the intervention compared to the control group. It is observed that the impact on the employability index is more pronounced at 6.1% when the intervention involves vocational training, surpassing the 5.3% effect seen in the case of self-esteem treatment.
- **Improvement in optimism in the job search:** participants who underwent any treatment from those offered experienced a significant impact, showing a 3.85% improvement on the Motivated Job Search Behaviors (COMOBE) scale compared to the control group.
- **Improved proactivity in job searches:** people who receive vocational training experienced a positive impact of 5.44% and 5.39% for the group that receives training in personal skills, compared to the control group.
- **Improvement of planned behavior and motivation in the job search**: for those participants who underwent vocational training, a notable positive effect of nearly 8.55% was observed compared to the control group in the insertion facilitator system subscale (IFS). Further analysis reveals a particularly strong impact on the behavioral subindex, with individuals showing a 10.88% improvement after receiving vocational training.

1 Introduction

General Regulatory Framework

The Minimum Income Scheme (MIS), regulated by Law 19/2021[1], is an economic benefit whose main objective is to prevent the risk of poverty and social exclusion of people in situations of economic vulnerability. Thus, it is part of the protective action of the Social Security system in its non-contributory modality and follows the recommendations of various international organizations to address the problem of inequality and poverty in Spain.

The provision of the MIS has a double objective: to provide economic support to those who need it most and to promote social inclusion and employability in the labor market. This is one of the social inclusion policies designed by the General State Administration, together with the support of the Autonomous Communities, the Third Sector of Social Action organizations, and local corporations[2]. It is a central policy of the Welfare State that aims to provide minimum economic resources to all individuals in Spain, regardless of where they live.

Within the framework of the National Recovery, Transformation, and Resilience Plan (RTRP),[3] the General Secretariat of Inclusion (onward SGI by its acronyms in Spanish) of the Ministry of Inclusion, Social Security, and Migration (MISSM) participates significantly in Component 23 "New public policies for a dynamic, resilient and inclusive labor market", framed in Policy Area VIII: "New care economy and employment policies".

Investment 7: "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme" is among the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new model of inclusion based on the MIS which reduces income inequality and poverty rates. Therefore, the MIS goes beyond being a mere economic benefit and supports the development of a series of complementary programs that promote socio-labor inclusion. However, the range of possible inclusion programs is very wide, and the government decides to pilot different programs and interventions to evaluate them and generate knowledge that allows prioritizing certain actions. With the support of investment 7 under component 23, the MISSM establishes a new framework for pilot inclusion projects constituted in two phases through two royal decrees covering a set of pilot projects based on experimentation and evaluation:

[1] Law 19/2021, of December 20, establishing the Minimum Income Scheme (BOE-A-2021-21007).

[2] Article 31.1 of Law 19/2021, of December 20, 2021, establishing the Minimum Income Scheme.

[3] The Recovery, Transformation, and Resilience Plan refers to the Recovery Plan for Europe, which was designed by the European Union in response to the economic and social crisis triggered by the COVID-19 pandemic. This plan, also known as Next Generation EU, sets out a framework for the allocation of recovery funds and for boosting the transformation and resilience of member countries' economies.

- **Phase I: Royal Decree 938/2021**[4], through which the MISSM grants subsidies for the execution of 16 pilot projects of inclusion pathways corresponding to autonomous communities, local organizations, and the Third Sector of Social Action organizations. This royal decree contributed to the fulfillment of milestone number 350[5] and monitoring indicator 351.1[6] of the RTRP.
- **Phase II: Royal Decree 378/2022**[7], which grants subsidies for a total of 18 pilot projects of inclusion pathways executed by autonomous communities, local organizations, and the Third Sector of Social Action organizations. Along with the preceding Royal Decree, this one helped the RTRP's monitoring indicator number 351.1 to be fulfilled.

To support the implementation of evidence-based public and social policies, the Government of Spain decided to evaluate the social inclusion pilot projects using the Randomized Controlled Trial (RCT) methodology. This methodology, which has gained relevance in recent years, represents one of the most rigorous tools to measure the causal impact of a public policy intervention or a social program on indicators of interest, such as social and labor insertion or the well-being of beneficiaries.

Specifically, RCT is an experimental method of impact evaluation in which a representative sample of the population potentially benefiting from a public program or policy is randomly assigned either to a group receiving the intervention or to a comparison group that does not receive the intervention for the duration of the evaluation. Thanks to the random allocation of the program, this methodology can statistically identify the causal impact of an intervention on a series of variables of interest. This methodology enables us to analyze the effect of this measure, which helps to determine if the policy is adequate to achieve the planned public policy objectives. Experimental evaluations enable us to obtain rigorous results of the intervention effect, i.e., what changes the participants have experienced in their lives due to the intervention. In addition, these evaluations provide an exhaustive analysis of the program and its effects, providing insights into why the program was effective, who has benefited

[4] Royal Decree 938/2021, of October 26, 2021, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2021-17464).

[5] Milestone 350 of the RTRP: "Improve the rate of access to the Minimum Income Scheme and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and entities of the Third Sector of Social Action to conduct the itineraries. The objectives of these partnership agreements are: (i) to improve the MVI access rate; ii) increase the effectiveness of the MVI through inclusion policies."

[6] Monitoring indicator 351.1 of the RTRP: "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and entities of the Third Sector of Social Action to conduct pilot projects to support the socio-economic inclusion of MVI beneficiaries through itineraries".

[7] Royal Decree 378/2022, of May 17, 2022, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of €102,036,066, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2022-8124).

most from the interventions, whether it has indirect or unexpected effects, and which components of the intervention work and which do not.

These evaluations have focused on the promotion of social and labor inclusion among MIS beneficiaries, recipients of regional minimum incomes and other vulnerable groups. In this way, the MISSM establishes a design and impact evaluation of results-oriented inclusion policies, which offers evidence for decision-making and its potential application in the rest of the territories. The promotion and coordination of 32 pilot projects by the Government of Spain has led to the establishment of a laboratory for innovation in public policies of global reference named as the Inclusion Policy Lab.

For the implementation and development of the Inclusion Policy Lab, the General Secretariat of Inclusion has established a governance framework that has made it possible to establish a clear and potentially scalable methodology for the design of future evaluations, and the promotion of decision-making based on empirical evidence. The General State Administration has had a triple role as promoter, evaluator, and executive of the different programs. Different regional and local administrations and the entities of the Third Sector of Social Action have implemented the programs, collaborating closely in all their facets, including evaluation and monitoring. In addition, the Ministry has had the academic and scientific support of the Abdul Latif Jameel Poverty Action Lab (J-PAL) Europe and the Centre for Monetary and Financial Studies (CEMFI), as strategic partners to ensure scientific rigor in the assessments. Likewise, the Inclusion Policy Lab has an Ethics Committee[8], which has ensured the strictest compliance with the protection of the rights of the people participating in the social inclusion itineraries.

This report refers to the pilot project "Inclusion from responsible participation", executed within the framework of Royal Decree 378/2022[9] by the Santander City Council. This report contributes to the fulfillment of milestone 351 of the RTRP "Following the completion of at least 18 pilot projects, the publication of an evaluation on the coverage, effectiveness and success of the MIS, including recommendations to increase the level of application and improve the effectiveness of social inclusion policies".

Project context

Social exclusion goes beyond economic deprivation, it is a multidimensional phenomenon that impacts various aspects of people's lives, hindering their full participation in society. It is a complex process that involves the lack of denial of resources, rights, goods, and services (Levitas et al., 2007; United Nations, 2016). The European Anti-Poverty Network (EAPN) identifies five primary dimensions that define social marginalization. The economic dimension is characterized by the lack of resources and essential goods. The social dimension encompasses exclusion from community life, while the

[8] Regulated by Order ISM/208/2022, of March 10, 2022, which creates the Ethics Committee linked to social inclusion itineraries, on 20/05/2022 it issued a favorable report for the realization of the project that is the subject of the report.

[9] On 26 September 2022, an agreement was signed between the General State Administration, through the SGI, and the Santander City Council for the implementation of a project for social inclusion within the framework of the Recovery, Transformation and Resilience Plan, which was published in the "Official State Gazette" on 7 October 2022 (BOE no. 241).

political dimension restricts participation in decision-making processes. The cultural dimension involves limited access to education and cultural identity, and the residential dimension relates to inadequate housing. These dimensions are interrelated and collectively influence individuals' vulnerability to social exclusion.

Therefore, a wide range of factors determine the underlying causes of social exclusion, from low levels of education, often accompanied by greater job insecurity, to low self-esteem and lack of motivation to progress. Prolonged unemployment exacerbates social exclusion, exposing individuals to various personal and social challenges. Consequently, lack of employment and low incomes often lead to sustain social marginalization.

The consequences of low education levels and self-esteem are significant from multiple perspectives. Economically, they lead to the obsolescence of human capital and a continual loss of skills, making reintegration into the labor market challenging. Additionally, prolonged unemployment can reduce self-esteem and deteriorate mental health, contributing to social exclusion and isolation. Thus, this issue must be addressed comprehensively, with a particular focus on the training and personal environments of the affected individuals.

The at-risk-of-poverty or exclusion (AROPE) rate [10] in Spain stood at 26.5% of the population in 2023, thus affecting 12.6 million people. Poverty levels are closely linked to the labor market situation, with Spain experiencing a structural and persistent unemployment problem. In 2023, the average unemployment rate in Spain was 12.1%[11]. In contrast, within the EU-27, 21.6% of the population was at risk of poverty and/or social exclusion in 2023, with an unemployment rate of 6.2% in 2022[12]. These statistics underscore the heightened vulnerability of the Spanish population, showing a poverty and social exclusion risk 4.9 percentage points higher than the EU-27 average, and an unemployment rate twice that of the EU-27.

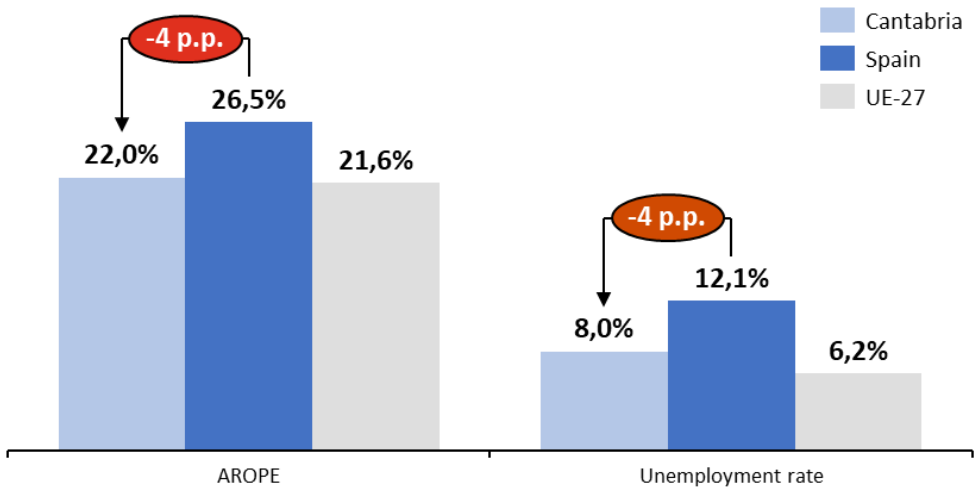
When focusing on the Autonomous Community of Cantabria, the findings mirror those at the national level, revealing a reduced incidence of poverty or social exclusion, as indicated by the AROPE indicator, compared to the Spanish average, alongside a diminished prevalence of unemployment. Specifically, in 2023, Cantabria's AROPE indicator stood at 22%, representing a 4.5 percentage point decrease from the national rate. Regarding the unemployment rate, Cantabria reported a rate of 8.1% in 2023, marking a 4-percentage point decline from the national figure, though slightly exceeding the European average by 1.9 percentage points.

[10] This rate indicates the percentage of people who are in at least one of these three situations: (i) below the at-risk-of-poverty threshold; (ii) suffering severe material deprivation, and (iii) in low-intensity work households.

[11] Labor Force Survey, INE (2023).

[12] This is the latest data available at EU27 level at the time of publication of this report.

Figure 1: Poverty and/or social exclusion rate (AROPE) and unemployment rate in Cantabria, Spain, and EU-27[13]



Source: Labor Force Survey (EPA) and Living Conditions Survey (ECV) of the INE and EU-SILC of Eurostat.

Despite Cantabria — the focus of this study — registering one of Spain's lowest rates of social exclusion and unemployment in 2023, there's a recognized need to foster self-awareness and enhance the self-esteem levels of the most vulnerable segments of the population. This underscores the imperative to develop comprehensive programs addressing both emotional and training requirements.

Regulatory framework associated with the project and governance structure

The problem of social exclusion has been addressed by all different public institutions. For instance, at the European level, the approval of the European Pillar of Social Rights Action Plan in 2021 aims to complement Member States' efforts by providing quality social services and integrating the most disadvantaged groups into the labor market and broader society.

At the national level, the National Strategy for the Prevention and Fight against Poverty and Social Exclusion serves as a key reference document. It reflects the commitment of the Spanish government to uphold and enhance the Welfare State to address social challenges, particularly ensuring the full social inclusion of the most vulnerable. Furthermore, Royal Decree 818/2021, issued on September 28, regulates the employment activation programs of the National Employment System.

In a regional context, Cantabria Law 2/2007 on Social Rights and Services holds prominence. Updated as of January 1, 2024, this legislation is pivotal in shaping a model of social services. It establishes a framework for social protection and citizens' rights, aiming to ensure comprehensive coverage and support within the region.

[13] Data relating to 2023 for Cantabria and Spain; and corresponding to 2022 for the EU-27.

Finally, all European and national regulations are in line with the framework established in the 2030 Agenda and with the Sustainable Development Goals (SDGs).

This pilot project aligns with European and national in the field of social exclusion, as well as with the 2030 Agenda for Sustainable Development, contributing specifically to SDGs 1, 4, 8, and 10.

Given the context of vulnerability and social exclusion in Cantabria, particularly within the Santander City Council, this project seeks to enhance the quality of life for individuals at risk of social exclusion. This initiative aims to achieve this goal through interventions focused on improving self-esteem, fostering personal empowerment, and enhancing individual qualifications.

The scientific objective of the project is to evaluate the effectiveness and efficiency of this model of personalized itineraries of empowerment, training, and employment, in comparison to the traditional model of labor insertion. In addition, it is intended to promote the transfer of knowledge to the public policy-making process and to be accountable for the results of the project.

The governance framework set up for the proper implementation and evaluation of the project includes the following actors:

- The **Santander City Council**, as the entity responsible for the execution of the project and the **University of Cantabria**, as a support entity in carrying out evaluation activities.
- The **Ministry of Inclusion, Social Security and Migration** (MISSM), as the project funder, and the main responsible for the RCT evaluation process. Thus, the General Secretariat of Inclusion (SGI) assumes the following commitments:
    - Providing support to the beneficiary organization for the design of actions to be conducted for the execution and monitoring of the grant object, as well as profiling potential participants in the pilot project.
    - Designing the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary organization and scientific collaborators. Additionally, conducting the project evaluation.
    - Ensuring strict compliance with ethical considerations by obtaining approval from the Ethics Committee.
- **CEMFI and J-PAL Europe,** as scientific and academic institutions that support MISSM in the design and RCT evaluation of the project.

In view of the above, this report follows the following structure. **Section 2** provides a project description, detailing the issues to be addressed, the target audience for the intervention, and the specific interventions. Next, **Section 3** contains information related to the evaluation design, defining the theory of change linked to the project, hypotheses, sources of information, and indicators used. **Section 4** describes the implementation of the intervention, analyzing the sample, the results of random allocation, and the level of participation and attrition in the intervention. This section is followed by **Section 5**, which presents the evaluation results, with a detailed analysis of the econometric analysis carried out and the results for each of the indicators used. Finally, the general

conclusions of the project evaluation are described in **Section 6**. Besides, in the **Economic Management and Regulatory appendix**, additional information is provided on management tools and project governance.

Ethics Committee linked to the Social Inclusion Itineraries

During research involving human individuals, in the field of biology or the social sciences, researchers and workers associated with the program often face ethical or moral dilemmas in the development of the project or its implementation. For this reason, in many countries it is common practice to create ethics committees that verify the ethical viability of a project, as well as its compliance with current legislation on research involving human beings. The Belmont Report (1979) and its three fundamental ethical principles – respect for individuals, profit, and justice – constitute the most common frame of reference in which ethics committees operate, in addition to the corresponding legislation in each country.

With the aim of protecting the rights of participants in the development of social inclusion itineraries and ensuring that their dignity and respect for their autonomy and privacy are guaranteed, Order ISM/208/2022 dated March 10 creates the Ethics Committee linked to the Social Inclusion Itineraries. The Ethics Committee, attached to the General Secretariat of Inclusion and Social Welfare Objectives and Policies, is composed of a president – with an outstanding professional career in defense of ethical values, a social scientific profile of recognized prestige and experience in evaluation processes – and two experts appointed as members.

The Ethics Committee has conducted analysis and advice on the ethical issues that have arisen in the execution, development, and evaluation of the itineraries, formulated proposals in those cases that present conflicts of values and approved the evaluation plans of all the itineraries. In particular, the Ethics Committee issued its approval for the development of this evaluation on October 31, 2023.

2 Description of the program and its context

This section describes the program that the Santander City Council implemented in the framework of the pilot project. Furthermore, it defines the target population, the territorial scope, and provides a detailed description of the intervention.

2.1 Introduction

This study aims to enhance the lives of those receiving the Minimum Income Scheme, the Basic Social Income of Cantabria, and individuals affected by social exclusion or vulnerability. It seeks to foster inclusion and social participation within the Santander City Council while preventing chronic dependency on the social protection system. The study emphasizes individual activation and offers certified training modules to improve skills and qualifications.

One of the most notable empirical studies on efforts against social exclusion is conducted by McFarland (2017). This study examines a series of experiments centered on basic household income schemes. Several experiments highlighted in this study utilize the RCT methodology, rendering them significant references for comprehending the impact of introducing minimum incomes schemes. For instance, the study highlights an experiment conducted in Kenya, examining the repercussions of introducing cash transfers. This initiative yielded positive economic and psychological outcomes for the participants. Additionally, the analysis includes a study of cash transfers implemented in Barcelona as part of the B-MINCOME program, a project elaborated upon later. Furthermore, in evaluating active employment policies via local initiatives, the research by Rebollo-Sanz and Pérez (2021) merits attention. This study showcases enhancements in employment rates and participant satisfaction levels achieved through the direct creation of public-sector jobs, facilitated by municipal direct hiring initiatives. Specifically, the research highlights positive outcomes among unemployed individuals aged over 30 facing substantial challenges in social and labor integration. Additionally, it underscores the necessity for substantial adaptations of employment policies tailored to the specific needs of the target age group.

Moreover, the perception of not being potentially employable due to prevailing economic conditions (De Battisti et al., 2016) can pose challenges in job search endeavors (Koen et al., 2013; Cifre et al., 2018). Individuals often respond based on their perceived employability (Forrier et al., 2015; Lo Presti & Pluviano, 2016), and conversely, may refrain from acting when they perceive themselves as lacking employability due to uncertainties surrounding the outcome (Verbruggen & De Vos, 2019). Therefore, it is crucial to examine strategies for incentivizing individuals' self-reported employability. Self-reported employability refers to an individual's assessment of their prospects for securing employment in the labor market. This evaluation is influenced by contextual factors and individual characteristics, including the individual's psychological state (Chen & Lim, 2012).

Among the main empirical studies on long-term unemployment, the research carried out by Cottier et al. (2018) in Switzerland using a RCT is particularly noteworthy. This study investigates the effectiveness of job search training in enhancing employment levels. Additionally, Card et al. (2010, 2018) asserts that providing support in job search efforts is one of the most effective components of active policies aimed at revitalizing the labor market. Furthermore, their meta-analysis underscores that integrated interventions, combining employment and training, yield positive impacts in the medium and long term, whereas other employment policies, such as subsidies, have comparatively smaller effects.

The type of training provided significantly influences the extent of its impact on labor market integration. Technical vocational training, for instance, leads to substantial income increases and enhanced employability, particularly in the short and medium term. Noteworthy are the findings regarding soft skills, which reveal a positive long-term impact on employment (Barrera-Osorio et al., 2023). Moreover, a positive correlation has been established between soft skills—such as motivation, self-efficacy, and perseverance—and favorable outcomes in the labor market (Brunello, Schlotter, 2021)

In general, programs that integrate skill development, self-esteem enhancement, job search assistance, and proactivity demonstrate higher chances of successful labor market integration compared to single-approach models (Liu et al., 2014). As such, the primary intervention areas of the project revolve around employment and socio-labor initiatives, tailored to the specific treatment received.

2.2 Target population and territorial scope

The target population of the project encompasses individuals who receive and apply for the Minimum Income Scheme (MIS) and the Basic Social Income of Cantabria (RSB), along with others experiencing social exclusion. Through structured training pathways, the project aims to enhance the quality of life, foster inclusion, and promote socio-labor participation among these individuals.

The Santander City Council itself oversees the recruitment of potential participants through various specified channels outlined in **section 3.5**. To be eligible for participation in the project, individuals must meet the following requirements:

- **Residential situation**: residents of Santander.
- **Age**: people between 18 and 64 years old.
- **Administrative situation**: to be in Spain in a regular situation.
- **Language**: basic and sufficient knowledge of Spanish.
- **Social exclusion**: recipient or applicant of the RSB or MIS or being in a situation of social exclusion or vulnerability (requirement based on professional assessment by social entities).

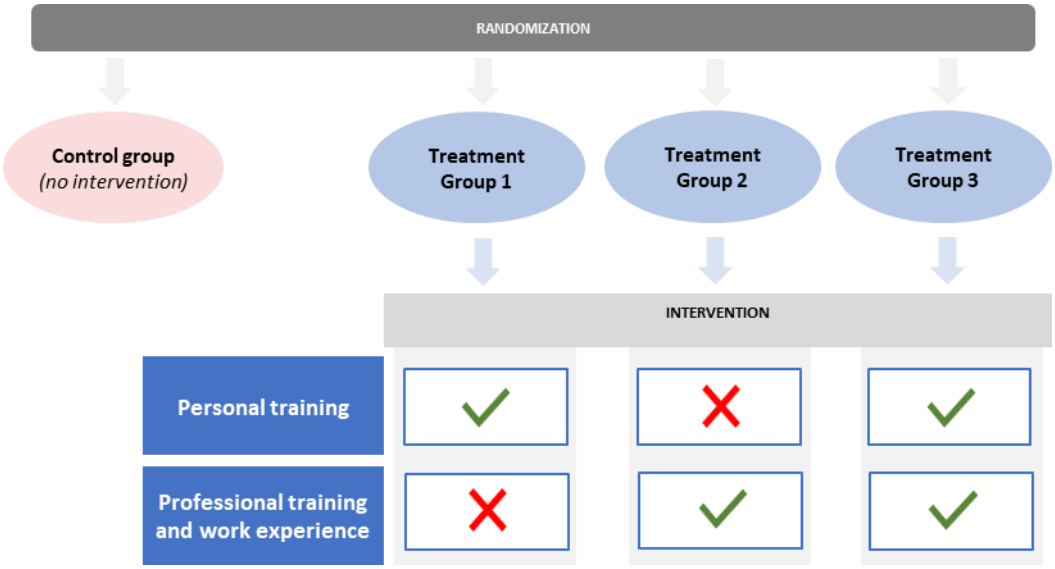
2.3 Description of interventions

The present study has opted for a 2x2 research design, in which two types of interventions are combined:

- **Intervention 1: Personal training,** comprising workshops designed to enhance self-esteem and personal empowerment.
- **Intervention 2**: **Vocational training and internships**, involving vocational training tailored to profiles such as kitchen assistant, waiter, and civil assistant. This training is supplemented by internships in companies available to all program participants upon completion of their vocational training.

These interventions are combined following the 2x2 RCT methodology, with a control group and three treatment groups. The control group does not receive any type of intervention. Treatment Group 1 receives personal training; Treatment Group 2 receives specific training and work experience; and Treatment Group 3 receives both actions. **Figure 2** summarizes the actions corresponding to each experimental group.

Figure 2: Itinerary outline



To conduct this study, the participants are divided into four different groups, configured as follows:

- **Treatment Group 1**: they receive the 'Personal Training' action aimed at improving self-esteem and personal empowerment.
- **Treatment Group 2**: they receive the performance 'Professional training and work experience'.
- **Treatment Group 3**: they receive the two interventions, 'Personal training' and 'Professional training and work experience'.
- **Control Group**: the participants in this group do not receive any type of performance.

The services included in each of the two defined actions are outlined below:

Personal training

The personal training workshops aim to enhance self-esteem and personal empowerment through a structured program lasting approximately 15 hours, distributed over 5 days, with each session lasting 3 hours. The workshops accommodate groups of 17 individuals. The primary objective is to cultivate strategies for improving self-esteem, fostering a positive self-perception, and promoting greater self-determination. The treatment approach integrates cognitive, behavioral, and emotional strategies, encompassing the following components:

- Self-esteem concept
- Importance of self-esteem
- Formation of self-esteem
- Basic Foundations of Self-Esteem
- Characteristics of positive and negative self-esteem
- Unconditional positive appreciation
- How I am and how they see me

- Dimensions of self-concept
- Realistic and positive self-evaluation
- Distorted thoughts
- Cognitive restructuring
- Troubleshooting
- Decision-making

Professional training and work experience

The second treatment involves professional training focusing on one of the following profiles, with a daily schedule of 5 hours:

- Kitchen Assistant (80 hours)
- Waiter (80 hours)
- Civil Cleaning Assistant (50 hours)

The training consists of 12 courses in the field of hospitality and another 12 in the field of industrial cleaning, agreed with two Business Associations, the Cantabria Hotel and Catering Business Association and the Regional Association of Cleaning Companies of Cantabria.

The objective of these itineraries is to impart fundamental professional skills, subsequently supplemented with internships in companies available to all graduates of the vocational training program. These internships typically last approximately 20 hours and serve to enhance the skills acquired during vocational training, boost confidence, and enhance the prospects of reintegration into the labor market. Moreover, the management of these internships with the companies is handled directly by the Business Associations themselves.

In contrast, the control group did not undergo any form of intervention; instead, they received an economic incentive totaling €150, disbursed in two separate payments. The initial payment of €50 coincided with the completion of the first questionnaire (baseline), while the second payment of €100 was provided upon the completion of the final questionnaire.

3 Evaluation design

This section describes the design of the impact assessment of the projects outlined in the preceding section. The section describes the Theory of Change, which identifies the mechanisms and aspects to measure, the hypotheses to test in the evaluation, the sources of information to build the indicators, the indicators, and the design of the experiment.

3.1 Theory of Change

This report, with the aim to design an evaluation that enables us to understand the causal relationship between the intervention and its final objective, develops a Theory of Change. The Theory of Change

schematizes the relationship between the needs identified in the target population, the benefits, or services that the intervention provides, and the immediate and medium-long term results sought by the intervention. It explains the relationships between these elements, the assumptions underlying them, and outlines measures or outcome indicators.

Theory of Change

A Theory of Change begins with the correct identification of the needs or problems to be addressed and their underlying causes. This situational analysis should guide the design of the intervention, i.e., the activities or products that are provided to alleviate or resolve the needs, as well as the processes necessary to properly implement the treatment. Next, we identify the expected effect(s) based on the initial hypothesis, i.e., what changes – in behavior, expectations, or knowledge – are expected to be obtained in the short term with the actions conducted. Finally, the process concludes with the definition of the medium- to long-term results that the intervention aims to achieve. Sometimes, the effects directly obtained with the actions are identified as intermediate results and one identifies the indirect effects in the final results.

The development of a Theory of Change is a fundamental element of impact evaluation. At the design stage, the Theory of Change helps to formulate hypotheses and identify the indicators needed for the measurement of results. Once the results are achieved, the Theory of Change makes it easier, if results are not as expected, to detect which part of the hypothetical causal chain failed, as well as to identify, in case of positive results, the mechanisms through which the program works. Likewise, the identification of the mechanisms that made the expected change possible allows a greater understanding of the possible generalization or not of the results to different contexts.

The Santander City Council has identified a critical need to enhance self-esteem and personal empowerment among recipients of the MIS and the Basic Social Income of Cantabria, as these factors are closely linked to their low employability.

The identified need or problem delineates the three areas of action within the project, along with the associated activities, aligning with the mixed intervention approach proposed: personal and professional training, and work experience. Specifically, the personal training intervention addresses the deficit in technical skills through in-person training sessions, supplemented by internships in companies to enhance participants' professional competencies. This training in self-esteem and empowerment spans a total of 15 hours.

As for vocational training, three distinct courses are included: kitchen assistant, comprising 80 hours; waiter training, also spanning 80 hours; and civil cleaning assistant training, covering 50 hours. Additionally, 20 hours of company internships are incorporated, consistent with the professional training curriculum.

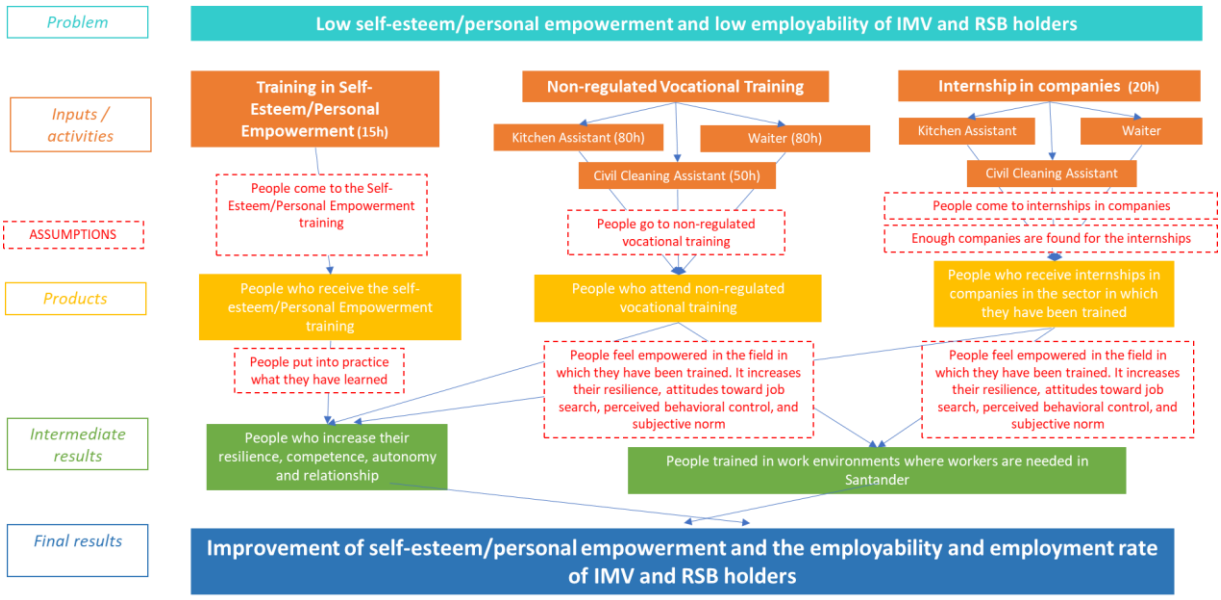
All these resources and activities yield a series of outputs. Measuring these outputs helps determine whether beneficiaries have received the activities or inputs and to what extent. Proper reception of the resources and activities performed is essential for the program to achieve the expected

intermediate and final results. If beneficiaries do not effectively receive the program, it is difficult to observe improvements in the indicators of employment, housing situation or quality of life. In this project, outputs are defined as the number of people who attend self-esteem and empowerment training, and who also gain experience and job training. Without the receipt of these outputs or provisions, improvements in poverty levels and social inclusion of families cannot be expected.

In the short term, the project anticipates the acquisition of professional skills through the initial training phase. This is expected to enhance employability and proactivity among participants, driven by an improved facilitation system for job placement resulting from the internships and non-regulated training opportunities provided. Additionally, beneficiaries are anticipated to experience an improvement in self-esteem through the acquisition of personal skills, facilitated by individualized training in this area.

Consequently, individuals are expected to experience a significant improvement in competency, autonomy, and job readiness over the medium to long term. This improvement is poised to positively impact self-esteem, employability, and employment rates among project participants.

Figure 3: Theory of Change



3.2 Hypothesis

The main objective of the personalized training in self-esteem and employment is to enhance both the personal and professional skills of project participants.

It's essential to highlight that, as outlined in the Theory of Change, this project primarily focuses on enhancing workplace outcomes (such as labor market integration or improving employment situations) and personal skills. This multidimensional approach facilitates a comprehensive evaluation of the intervention's impact on beneficiaries' lives and provides a deeper understanding of its effectiveness across various dimensions.

The main hypotheses to be tested in each major area are outlined below, structured around the intermediate and final outcomes specified in the Theory of Change, with primary and secondary hypotheses.

1. Improved self-esteem and personal empowerment

Two primary hypotheses are posited. Firstly, it is proposed that personalized training enhances participants' resilience capacities compared to the traditional model. Additionally, it is suggested that the perception of personalized treatment leads to an improvement in participants' satisfaction levels regarding their basic psychological needs.

Furthermore, a secondary hypothesis posits an enhancement in participants' levels of competence, autonomy, and interpersonal relationships within the personalized training model compared to the traditional approach.

2. Improvement of planned behaviour and proactivity

The main hypothesis is an improvement in employability in general, after receiving training adapted to the needs of the participants.

This block incorporates several secondary hypotheses related to job search behavior and attitude, aiming to bolster employability. Consequently, one secondary hypothesis suggests that participants, supported by psychosocial training and personal assistance, exhibit improved behavior conducive to increased job search activity. Furthermore, another secondary hypothesis indicates that completion of professional internships and non-regulated training fosters a more proactive attitude towards job seeking among participants.

Moreover, a third secondary hypothesis suggests that completion of courses and professional internships leads to an improvement in participants' self-reported employability. Lastly, all these training initiatives collectively contribute to the final secondary hypothesis of this block, proposing an enhancement in individuals' self-perception due to personalized training in self-esteem and empowerment.

3. Improvement in employment

The hypothesis posits that an enhancement in behavior and attitudes toward job search, coupled with non-formal training and internships in companies, results in improved employment levels among participants.

3.3 Sources of information

Surveys constitute the main method for gathering essential data to formulate outcome indicators, with a particular focus on participants engaged in the personal and work training pathway.

Participant surveys are administered at two distinct points in time: prior to the intervention (baseline) and following its completion (endline). Data collection occurs at these two intervals through

standardized questionnaires. These surveys encompass inquiries related to autonomy, competence, and connection/relationship, as per the Self-Determination Theory. Additionally, they cover aspects such as attitudes, subjective norms, perceived behavioral control, intention, and job-seeking behavior, in line with the Planned Action Theory. Questions regarding resilience are also integrated into the surveys. The data collection process is conducted directly by the Santander City Council, facilitated by members of the Research Group on Socio-Emotional Development, Well-being, and Education (IDSEBE) at the University of Cantabria. The estimated duration of the questionnaire is approximately 15 minutes, and it entails the administration of standardized surveys.

The impact assessment on self-esteem/empowerment and employability indicators will determine whether training in self-esteem/empowerment alone is adequate for enhancing these indicators, or if additional specific training with a focus on employment is necessary.

The baseline survey includes the following questionnaires:

- **Sociodemographic variables:** questions pertaining to age, highest level of education attained, relationship with cohabitants, current employment situation, degree of satisfaction with current employment, and average income.
- **Living conditions: i**nquiries about the adequacy of participants' homes in terms of temperature and potential payment delays. The questions also assess general satisfaction and five-year forecasts for satisfaction and income. These questions are exclusive to the final survey.
- **Attendance at courses and/or training**: participants are questioned about their attendance at training courses organized by the Santander City Council over the past 6 months, alongside their satisfaction levels with these courses. These inquiries are specifically administered in the final survey.
- **Connor-Davidson Resilience Scale – CD-RISC 10:** a questionnaire measuring psychological resilience, featuring 10 items rated on a 5-point Likert scale. It evaluates aspects such as the ability to recover from stress, adaptability to change, and reaction to difficulties.
- **Scale of satisfaction of basic psychological needs in general (Theory of Auto determination[14]):** serves as a psychological instrument to evaluate satisfaction levels across three fundamental domains: autonomy, competence, and relationship. Each of these areas comprises a series of questions aimed at assessing the participant's degree of satisfaction, detailed as follows:
    - **Degree of competence:** questionnaire with a total of 6 questions on the level of competence presented by the participants. It covers topics such as the aptitudes, goals, and challenges present in the lives of the participants.

[14] Self-determination theory (TDA) is a broad framework that explores the driving forces behind human motivation and individuality, focusing on our inherent inclinations for personal development and essential psychological requirements. Dig deeper into the reasons that guide our decisions when external pressures or distractions are minimal. ADT focuses on the extent to which our actions stem from an inner drive and personal determination (Ryan & Derci, 2000).

- **Degree of autonomy:** this block covers 7 questions about the degree of autonomy of the participants.
- **Degree of relationship:** questionnaire with 8 questions related to relationships with others, their level of satisfaction with them and with friendships.

- **Job Search Assessment Questionnaire (CEBE):** this questionnaire consists of 39 questions addressed to participants in both the treatment and control groups to measure proactivity and motivation in job search processes. Developed in accordance with the methodological framework established by Piqueras et al. (2016; 2018; 2021), this questionnaire is structured into three distinct blocks
  - Insertion Facilitation System (SFI): a 5-question questionnaire aimed at assessing individuals' approaches to job searches. This section specifically delves into topics including participants' level of information regarding job search, organizational skills during the process, proficiency in search techniques, morale levels, and short-term job attainment expectations.
  - Job search behaviors (ICBE): this block has a total of 14 questions on the frequency in which job search actions are carried out.
  - Motivated job search behaviors (COMOBE): a 20-question questionnaire that measures expectations about the achievement of a goal (self-efficacy, confidence, expectations of success and control over the outcome of the search), together with attitude and proactivity in the development of this (adaptability, initiative, and anticipation).

Furthermore, data from the administrative register of working lives will be utilized to access employment-related information. This data source will enable the measurement of the impact generated by these personal and professional training initiatives on employment outcomes.

3.4 Indicators

This section delineates the indicators employed for assessing the impact of the pathway, categorized by themes aligned with the hypotheses. Further elaboration on these indicators is provided in the **Description of outcome indicators appendix.**

1. Self-esteem and personal empowerment

The following indicators are used to assess the improvement in self-esteem and personal empowerment:

Connor-Davidson 10-item resilience scale indicator: calculated as the sum of the 10 simple indicators that make it up. Take values between 10 (absence of resilience) and 50 (maximum resilience). The Spanish version of the Connor-Davidson 10-item Resilience Scale - CD-RISC is used; Soler et al., 2015

Indicator of the degree of satisfaction of basic psychological needs: measured through the total score obtained from the indicators that represent the basic psychological needs. It is composed of a total of 21 simple indicators that make up 3 sub-indices (degree of competence, degree of autonomy and degree of relationship). The total score obtained is the result of the sum of the individual scores, to

obtain values between 21 (unsatisfied basic psychological needs) and 105 (fully satisfied psychological needs).

Degree of Competence Indicator: Calculated as a subscale of the General Psychological Needs Satisfaction Scale defined above. Thus, it is composed of a total of six indicators that measure the level of competence of the participants with respect to their knowledge and skills. It takes values between 6 (minimum level of competencies) and 30 (maximum level of competencies).

Degree of Autonomy Indicator: calculated as a subscale of the scale of satisfaction of general psychological needs defined above, focused in this case on a total of 7 simple indicators related to the autonomy of the participants. The total score is taken between 7 (absence of autonomy) and 35 (complete autonomy).

Degree of Relation Indicator: calculated as a subscale of the scale of satisfaction of general psychological needs defined above, focused in this case on a total of 8 simple indicators, related to the relationships of the participants with others. The total score is obtained after the sum of the individual indicators to obtain values between 8 (absence of satisfactory relationships) and 40 (complete fullness in relationships).

2. Planned behavior and proactivity

To evaluate an improvement in behavior towards job searching, with greater proactivity, the following indicators are presented:

Employability (assessment of job search behaviors and attitudes, CEBE): global synthesis of the job search assessment questionnaire (CEBE), made up of the Insertion Facilitation System (SFI), Motivated Job Search Behaviors (COMOBE) and Job Search Behaviors (ICBE). This indicator is calculated as the sum of the 3 corresponding indicators (SFI, COMOBE and ICBE) and takes values on a scale between 38 (minimum employability of the participant) and 190 (maximum employability).

Motivated Job Search Behaviors (COMOBE): this is a synthetic indicator that measures the degree of proactivity and motivation towards employment based on the participants' answers to the 20 questions of the COMOBE. It is calculated as the sum of the variables involved and takes values on a scale of 20 (no motivation) to 100 (maximum motivation). This information is collected both at the beginning and at the end of treatment.

- **Unfounded optimism subindex:** synthetic sub-indicator that measures the level of optimism of the participants at the beginning and end of the intervention, through the participants' answers to 9 questions. This indicator is calculated as the sum of the variables involved, taking values on a scale between 9 (absence of optimism) and 45 (maximum level of optimism).
- **Proactivity subindex**: this is a synthetic sub-indicator that assesses the proactivity of participants in the job search process, based on the answers to 11 questions. This indicator is calculated as the sum of the variables involved, taking values on a scale between 11 (absence of optimism) and 55 (maximum level of optimism).

Job Search Behaviors (ICBE): synthetic indicator that measures job search behaviors, at the beginning and end of the intervention, through the participants' answers to the 13 questions of the ICBE. This indicator is also calculated as the sum of the variables involved, taking values on a scale between 13 (without any reported job search action) and 65 (maximum frequency in which work search actions are performed).

- **Total frequency subindex**: synthetic sub-indicator included within the indicator of job search behaviors that measures the frequency of job searches, through the answers of the participants to a total of 10 questions. This indicator is calculated as the sum of the variables involved, taking values on a scale between 10 (absence of job search application) and 50 (maximum frequency in job search).
- **Total Organization subindex**: A synthetic sub-indicator of the indicator of job-seeking behaviors, based on the answers to 3 ICBE questions related to the organization in the job search process. This indicator is calculated as the sum of the variables involved, taking values on a scale between 3 (absence of organization in the job search) and 15 (maximum frequency in the job search).

Total Indicator Insertion Facilitation System (IFS): synthetic indicator that measures how participants face the job search, based on the answers to the 5 questions of the SFI questionnaire. It is calculated as the sum of the variables involved and takes values between 5 (minimum score in all questions) and 25 (maximum level). This information is collected both at the beginning and at the end of treatment.

- **Behavioral subindex**: synthetic sub-indicator forming part of the indicator on the Insertion Facilitation System, based on the answers to 3 questions of the SFI questionnaire. It is calculated as the sum of the variables involved and takes values between 3 (minimum score in all questions) and 15 (highest level). This information is collected both at the beginning and at the end of treatment.
- **Motivation subindex**: synthetic sub-indicator forming part of the indicator on the Insertion Facilitation System, based on the answers to 2 questions of the SFI questionnaire. It is calculated as the sum of the variables involved and takes values between 2 (minimum score in all questions) and 10 (highest level). This information is collected both at the beginning and at the end of treatment.

Environment's perception on working situation: measured through a synthetic indicator that measures the perception of the participants' environment regarding the need to look for work, based on 4 questions. It is calculated as the sum of the variables involved and takes values between 4 (minimum score in all questions) and 20 (maximum level). This information is collected both at the beginning and at the end of treatment.

3. Employment

To assess an improvement in employment, this block is constructed from administrative data of the project that, so far, has not been able to be collected. This block would have two main results: an indicator of hours worked and an indicator of the employment situation of the participants. Thus, for

this last indicator, the **self-reported employment situation** of the individuals is used, obtained from the baseline and final questionnaire. This indicator takes the values 0 if the person is not working at that time or 1 if they are.

3.5 Experiment design

To assess the effect of treatment versus the control group on the above indicators, an experimental evaluation (RCT) is used in which participants are randomly assigned between the treatment and control groups.

The process of recruiting and selecting the beneficiaries of the intervention is detailed below, as well as the random assignment and time frame of the experiment.

Recruitment of the beneficiaries of the intervention

The project targets individuals in Santander who are recipients or applicants of the MIS or RSB, or who are facing social exclusion. To qualify as potential participants, individuals must meet the following criteria:

- Beneficiary of the MIS or RSB from January 2022 until the time when the collection ended.
- Individuals impacted by situations of exclusion or social vulnerability. Exclusion is delineated based on an evaluation tool crafted by the Santander City Council, which is distributed to Third Sector organizations involved in the selection process for this demographic. The criteria considered for this evaluation were as follows:
    - Economic, employment and residential situation
    - Coexistence (atmosphere in the accommodation, availability of emotional ties and social participation)
    - People (social skills, education-training, dynamism, and health)

  Each element was evaluated on a scale ranging from 0 to 1 for cohabitation and individuals (excluding health), and from 0 to 2 for economic, employment, residential, and health status. A score of 0 represented the most favorable condition, while 2 indicated the least favorable. A situation of exclusion is identified when the aggregate score surpasses 6.

  Additional criteria considered included residency in Santander, age between 18 and 64 years old, regular legal status, and proficiency in the Spanish language.

Beneficiary recruitment was conducted through both direct and indirect approaches. Direct methods involved reaching out to potential participants via available contact information such as telephone numbers. Indirect methods included advertising campaigns targeting the general population, allowing interested individuals to proactively contact the project to participate. Furthermore, additional contacts and calls were made to ensure the program attained the requisite number of participants.

- **Direct recruitment**: direct contact with the target population of the project through messages, and with a first call in which more information was provided regarding the intervention (dates, duration, restrictions, etc.) and a first interest in participating in the project was collected.

Subsequently, another telephone call is made to communicate the selection of the candidates and to carry out a brief questionnaire. They were also asked about preferences regarding the type of formations desired.

- **Indirect recruitment**: through an advertising campaign, a contact telephone number and a website were made available to interested parties. The people who got in touch, and who had not previously been called by direct recruitment, had to provide the necessary information to prove their status as beneficiaries or applicants for the MIS/RSB or their situation of social exclusion. In this case, a single call is made to communicate the selection of the candidate and proceed to the completion of an initial questionnaire. The interventions were explained in detail and preferences were asked regarding the type of training desired.

Informed consent and baseline questionnaire were collected for all participants during the first month after recruitment, regardless of where they were subsequently assigned, as well as the time at which they were going to receive treatment.

Informed consent

One of the fundamental ethical principles of research with human subjects (respect for people) requires that study participants be informed about the research and give their consent to be included in the study. Informed consent is usually given as part of the initial interview and has two essential parts: the explanation of the experiment to the subject, and the request and recording of their consent to participate. Consent should begin with a comprehensible presentation of the key information that will help the subject make an informed decision, i.e., understand the research, what is expected of them, and the potential risks and benefits. Documentation is required as a record that the process has taken place and as proof of informed consent, if so.

Informed consent is necessary in most research and may be oral or written, depending on different factors such as the literacy of the population or the risks posed by consent. Only under very specific circumstances, such as when the potential risks of participants are minimal and informed consent is very complex to obtain or would harm the validity of the experiment, informed consent may be avoided, or partial information may be given to participants with the approval of the ethics committee.

Random assignment of participants

Following the signing of the informed consent, intervention participants are randomly allocated to either the treatment or control group. Random assignment is pivotal in randomized controlled trials (RCTs) as it establishes a causal link between treatment and outcomes. Properly executed, this process guarantees statistical comparability between the treatment and control groups, accounting for both observable and unobservable variables. This uniformity ensures a robust framework for precisely gauging the intervention's potential effects.

It should be noted that, if some of the participants belonged to the same household unit, all the participants would be assigned to the same group. The assignment process was conducted by the MISSM based on a database resulting from the recruitment provided by the Santander City Council.

Additionally, no stratification variable was used for the randomization process. To maintain the desired ratio for each group, out of every 11 participants, 2 were assigned to each of the 3 treatments (T1, T2, and T3), and 5 to the control group.

Figure 4: Sample design

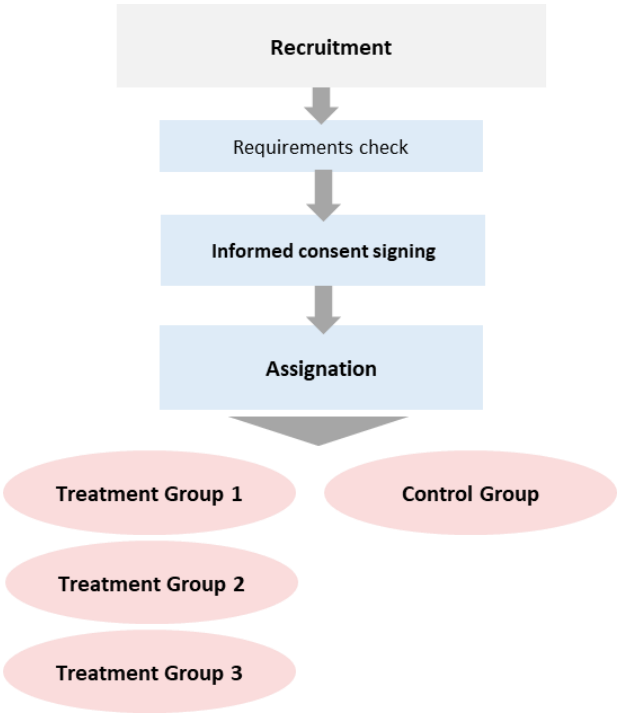
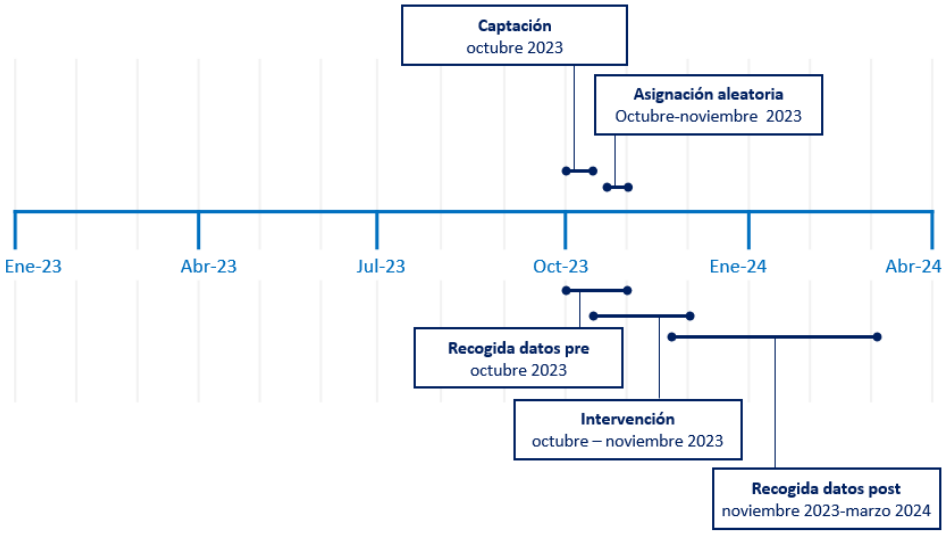


Figure 5 depicts the timeline for the implementation and evaluation of the itinerary. Following the evaluation design, the next phase involved attracting potential participants and ensuring their adherence to the specified requirements. This process occurred simultaneously with the signing of informed consent and data collection, which extended throughout October, aligning with group collection and random allocation. The intervention itself took place between October and November 2023. Subsequently, data collection continued post-intervention, spanning from November 2023 to March 2024.

Figure 5: Evaluation Timeframe



4 Description of the implementation of the intervention

This section describes the practical aspects of how the intervention was implemented, within the framework of the evaluation design. Describe the results of the participant recruitment process and other relevant logistical aspects to contextualize the results of the evaluation.

4.1 Sample Description

The initial pool of potential participants comprised 4,524 individuals, recipients of the MIS and the Basic Social Income of Cantabria, distributed across 3,539 files. This inclusive approach ensured that all individuals listed in the MIS files were identified and that those meeting the age criteria were included. Following data filtering to address potential duplications or redundant files, an initial outreach phase was initiated via calls to gauge interest in participation. Results revealed that 36% expressed no interest, 18% failed to meet eligibility criteria, and 28% were deemed invalid contacts due to unsuccessful communication attempts.

The recruitment campaign successfully garnered the interest of 682 individuals initially interested in participating in the program. However, 45% of this initial cohort failed to attend the first interview or sign the informed consent form. Additionally, 8 individuals attended the initial interview without being randomly assigned to any group, leading to their exclusion from the experimental sample. Consequently, the experimental sample consists of a total of 365 participants.

Final Assessment Sample Features

Table 2 offers a breakdown of socio-demographic characteristics and outcomes for participants at baseline. Of 365 participants, 344 answered the baseline survey. Not all the variables have 344 observations as not all the respondents answered all the questions. On average, participants were 46 years old, with a gender split of 64% female and 36% male. The majority (83%) were not currently working. Approximately, 4% of them had not completed any level of education, 24% finished primary education, another 24% finished secondary education and 16% high school education, 23% had some type of vocational training and 7% had a university degree or higher. Additionally, about 57% did not work in the last 12 months, while the remaining 43% worked at some point in the past year. On average, the participants had been unemployed for 35 months, while in terms of individual monthly income, 19% earned between 0 and 250 EUR, 80% earned between 250 and 1,500 EUR monthly and only 1% earned more than 1500 EUR per month. Finally, only 26% live alone.

Table 2 also shows the average values obtained for the results in blocks 1 (self-esteem and personal empowerment), 2 (planned behavior and proactivity) and 3 (employment). In general, the scoring obtained in the outcomes of the different three blocks are above half of their score, except the Unfounded Optimism subindex, ICBE subscale and the Frequency subindex. Since this project targets individuals facing challenges in entering the labor market, the value for self-reported employment is significantly below the midpoint.

Table 2: Descriptive statistics of the sample

Variable	Obs.	Mean	Standard deviation	Min.	Max.
Sociodemographic characteristics					
Female	339	0,64	0,48	0	1
Age	325	46,18	10,89	18	64
Currently working	311	0,17	0,38	0	1
No level of education	334	0,04	0,20	0	1
Primary education	334	0,24	0,43	0	1
Secondary education	334	0,24	0,43	0	1
Basic vocational training education	334	0,10	0,29	0	1
Intermediate vocational training education	334	0,08	0,28	0	1
Higher education vocational training	334	0,06	0,24	0	1
High school education	334	0,16	0,37	0	1
University education	334	0,05	0,22	0	1
Higher education	334	0,02	0,14	0	1
No work in last month	320	0,57	0,50	0	1

Variable	Obs.	Mean	Standard deviation	Min.	Max.
Work 0-3 months	320	0,20	0,40	0	1
Work 3-6 months	320	0,06	0,24	0	1
Work 6-9 months	320	0,04	0,20	0	1
Work 9-12 months	320	0,13	0,33	0	1
Total time of unemployment in the last months (in months)	272	35,61	41,36	0	180
Income 0-250 euros monthly	329	0,19	0,40	0	1
Income 251-500 euros monthly	329	0,27	0,44	0	1
Income 501-750 euros monthly	329	0,33	0,47	0	1
Income 751-1000 euros monthly	329	0,14	0,35	0	1
Income 1000-1500 euros monthly	329	0,05	0,22	0	1
Income more than 1500 euros monthly	329	0,01	0,08	0	1
Number of people you live with (without not counting yourself)	286	1,70	1,57	0	8
Live alone	342	0,26	0,44	0	1
Block 1 – Self-esteem and personal empowerment					
Resilience (Connor-Davidson)	331	37,68	9,37	1	50
Satisfaction (Theory of Auto determination)	332	79,49	14,61	5	104
Degree of Competence	331	22,36	4,84	4	30
Degree of Autonomy	331	26,19	5,19	5	35
Degree of Relationship	331	31,18	6,27	4	40
Block 2 – Planned behavior and proactivity					
Employability	335	128,80	36,00	7	190
COMOBE Subscale	330	72,28	17,96	7	100
Unfounded optimism subindex	325	33,55	8,29	1	45
Proactivity subindex	330	39,24	11,09	3	55
ICBE subscale	327	41,32	13,79	2	65
Frequency subindex	327	32,72	10,76	2	50
Organization subindex	319	8,81	3,72	1	15
IFS Subscale	328	17,18	4,55	5	25
Behavioral subindex	328	10,09	2,99	3	15
Motivation subindex	327	7,12	2,35	1	10
Environment's perception on working situation	321	15,60	4,27	3	20

Variable	Obs.	Mean	Standard deviation	Min.	Max.
Block 3 – Employment					
Self-reported employment	311	0,17	0,38	0	1

When the indicators are constructed as sums, the values lost in subcomponents of the indices are computed as zeros and some of the minimum values of the indicators are below the theoretical minimums.

4.2 Random Assignment Results

The campaign recruited 682 people interested in participating in the program. These individuals were randomly divided into the interventions (treatment groups) or the comparison group (control group), with the family being the unit of randomization. However, only 55% of the initial sample (373 participants) attended the first interview and signed the informed consent. In addition, 8 individuals attended the first interview without having been randomly assigned to any group, so they are excluded from our experimental sample. Therefore, our experimental sample includes 365 participants. It is composed of 73 (20%) individuals in Treatment group 1; 47 (12.88%) in the Treatment 2 group; 68 (18.63%) in Treatment group 3; and 177 (48.49%) in the control group.

The following table shows the result of the random assignment in each of the treatment groups.

Table 3: Random assignment results

Treatment Group 1 (self-esteem)	Treatment Group 2 (training and internships)	Treatment Group 3 (self-esteem, training, and internships)	Control group	TOTAL
73	47	68	177	**365**

To verify that the random assignment, explained in **section 3.5**, defines a statistically comparable control group and a treatment group, an equilibrium test is performed where it is verified that, on average, the observable characteristics of the participants in both groups are the same. The balance between the experimental groups is key to be able to infer the causal effect of the program by comparing its results.

The results of the equilibrium contrasts between the control group and the treatment group are shown below in **Figure 6**[15]. shows the balance tests results between the control group and the

[15] See **Table 37** in the appendix **Heterogeneity analysis**

This section presents analyses of the heterogeneity of the effects according to participants' characteristics. Specifically, it is analyzed whether the effects differ by gender, household typology (living alone) and not having worked in the previous year. To do so, the regressions follow identical specification to those in the previous section, but adding the variable for which the heterogeneous effects are to be estimated and the interaction of this variable with the treatment indicator.

Tables **13-20** assess whether the intervention has a differential impact on female participants compared to male participants. **Tables 20-28**, on the other hand, provide the differential impact of the intervention depending on whether the participants live alone. Finally, **Tables 29-36** present the possible impacts of the intervention on participants who did not work in the last year compared to those who worked at some point.

Heterogeneity by gender

Self-esteem and personal empowerment

Table 13 and **Table 14** report the heterogeneous effects in self-esteem and personal empowerment main, and secondary outcomes by gender. The coefficient of interest in this case corresponds to the interaction between treatment and the binary variable indicating gender (Treatment*Female), which captures the different effect on females compared to males. The coefficient of the treatment dummy estimates the effect of the treatment on males.

Table 13 and **Table 14** show that all coefficients capturing differential treatment effects are not significantly different from zero, suggesting that the treatment has no differential impact on females with respect to males in terms of self-esteem and personal empowerment. However, there is an exception to the degree of competence, where a greater impact of the intervention on this indicator is observed for women who have received the intervention from vocational training, with the impact being significantly greater at 3.25 points ($p<0.1$) for women in this treatment than for men.

Table 13: Gender-heterogeneous effects - Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		**Satisfaction (Theory of Auto determination)**	
	(1)	(2)	(3)	(4)
Treatment (all)	1.70		0.01	
	(1.66)		(2.11)	
Female	0.22	0.23	0.70	0.73
	(1.30)	(1.31)	(1.99)	(2.01)
Treatment (all)* Female	-1.32		1.66	
	(2.03)		(2.84)	

Self-esteem=1		2.34		-1.11
		(2.41)		(2.78)
Self-esteem=1*Female		-3.14		2.00
		(2.92)		(3.59)
Professional training=1		2.50		-1.61
		(2.37)		(4.78)
Professional training=1*Female		-0.03		5.86
		(2.78)		(5.59)
Self-esteem and professional training =1		0.83		1.66
		(2.19)		(2.63)
Self-esteem and training professional=1*Female		-0.64		-0.99
		(2.77)		(3.96)
Observation	266	266	267	267
R2	0.34	0.35	0.35	0.35
Control Group Mean	36.19	36.19	77.45	77.45

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 14: Gender-heterogeneous effects - Self-esteem and personal empowerment (secondary outcomes)

	Degree of Competence		**Degree of Autonomy**		**Degree of Relation**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	-0.45		0.24		0.14	
	(0.74)		(0.73)		(0.98)	
Female	-0.67	-0.17	0.87	0.88	0.72	0.73
	0.67)	(0.68)	(0.66)	(0.66)	(0.86)	(0.87)
Treatment	1.39		-0.34		0.08	

(all)*Female	(1.00)		(0.94)		(1.26)	
Self-esteem=1		-0.38		-0.23		-0.69
		(0.99)		(1.06)		(1.22)
Self-esteem=1*Female		1.45		-0.31		0.57
		(1.23)		(1.30)		(1.58)
Professional training=1		-1.68		0.40		-0.40
		(1.28)		(1.39)		(2.44)
Professional training=1*Female		3.25*		0.52		1.46
		(1.67)		(1.70)		(2.67)
Self-esteem and professional training =1		-0.00		0.52		1.46
		(1.02)		(1.70)		(2.67)
Self-esteem and training professional=1*Female		0.27		-0.92		-1.09
		(1.45)		(1.31)		(1.63)
Observation	266	266	267	267	266	266
R2	0.31	0.31	0.33	0.34	0.34	0.35
Control Group Mean	21.36	21.36	21.79	21.79	30.65	30.65

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Planned behavior and proactivity

Table 15 - **Table 19** presents the heterogeneous effects by gender on planned behavior and the results of proactivity. In none of the cases is the interaction coefficient significantly different from zero.

Table 15: Heterogeneous effects by gender - Planned behavior and proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	2.59	

	(4.24)	
Female	1.00	0.98
	(3.55)	(3.58)
Treatment (all)*Female	5.39	
	(5.35)	
Self-esteem=1		-0.11
		(8.27)
Self-esteem=1*Female		9.78
		(9.04)
Professional		8.54
training=1		(7.99)
Professional		-0.24
training=1*Female		(9.52)
Self-esteem and professional		2.12
training =1		(4.00)
Self-esteem and training		3.05
professional=1*Female		(6.04)
Observation	267	267
R2	0.54	0.55
Control group Mean	129.73	129.73

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 16: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity sub-index	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.37		0.82		1.35	
	(2.33)		(1.34)		(1.30)	
Female	1.34	1.32	1.33	1.33	0.28	0.26
	(1.76)	(1.77)	(0.99)	(1.00)	(1.05)	(1.05)
Treatment (all)*Female	0.58		0.34		-0.00	
	(2.92)		(1.58)		(1.73)	
Self-esteem=1		1.88		0.71		0.68
		(4.36)		(2.23)		(2.31)
Self-esteem=1*Female		2.33		0.47		1.90
		(4.84)		(2.48)		(2.74)
Professional training=1		2.51		-0.57		3.00
		(4.42)		(2.61)		(2.10)
Professional training=1*Female		1.24		1.91		-1.09
		(5.06)		(2.88)		(2.60)
Self-esteem and professional training =1		2.66		1.51		1.14
		(2.60)		(1.62)		(1.56)
Self-esteem and training professional=1*Female		-2.01		-0.48		-1.90
		(3.58)		(2.02)		(2.22)
Observation	266	266	266	266	265	265
R2	0.55	0.55	0.48	0.48	0.47	0.48
Control Group Mean	71.47	71.47	32.08	32.08	39.70	39.70

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 17: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.00		-0.19		0.109	
	(1.90)		(1.54)		(0.61)	
Female	0.79	0.79	0.52	0.54	0.33	0.33
	(1.51)	(1.53)	(1.21)	(1.22)	(0.45)	(0.45)
Treatment (all)*Female	2.79		2.36		0.40	
	(2.34)		(1.88)		(0.74)	
Self-esteem=1		-1.97		-2.03		-0.05
		(3.40)		(2.78)		(1.10)
Self-esteem=1*Female		5.17		4.40		0.61
		(3.73)		(3.03)		(1.22)
Professional training=1		5.93*		4.57*		1.42
		(3.24)		(2.67)		(0.98)
Professional training=1*Female		-4.14		-3.92		-0.38
		(3.98)		(3.23)		(1.21)
Self-esteem and professional training =1		-0.93		-0.68		-0.40
		(2.14)		(1.81)		(0.68)
Self-esteem and training professional=1*Female		3.76		3.66		0.24
		(2.93)		(2.38)		(0.91)
Observation	267	267	267	267	263	263
R2	0.50	0.51	0.49	0.50	0.39	0.40

Control Group Mean	42.21	42.21	33.15	33.15	9.12	9.12

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 18: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 3)

	IFS Subscale		**Behavior subindex**		**Motivation subindex**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.11		0.16		-0.05	
	(0.66)		(0.44)		(0.38)	
Female	-0.02	-0.02	0.11	0.11	-0.07	-0.07
	(0.64)	(0.64)	(0.44)	(0.44)	(0.33)	(0.33)
Treatment (all)*Female	0.90		0.31		0.51	
	(0.86)		(0.59)		(0.47)	
Self-esteem=1		-0.32		-0.54		0.21
		(1.04)		(0.63)		(0.61)
Self-esteem=1*Female		1.35		0.85		0.42
		(1.24)		(0.79)		(0.68)
Professional training=1		0.93		1.45***		-0.62
		(1.26)		(0.48)		(0.72)
Professional training=1*Female		0.93		-0.4		1.21
		(1.26)		(0.71)		(0.83)
Self-esteem and professional training =1		0.16		0.19		-0.04
		(0.81)		(0.55)		(0.45)
Self-esteem and training professional=1*Female		0.18		-0.04		0.14
		(1.14)		(0.76)		(0.61)
Observation	266	266	266	266	265	265

R2	0.39	0.40	0.31	0.33	0.40	0.40
Control Group Mean	16.73	16.73	10.20	10.20	6.58	6.58

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 19: Gender-heterogeneous effects - Planned behavior and proactivity (secondary outcomes - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.50	
	(0.80)	
Female	-0.15	-0.15
	(0.62)	(0.63)
Treatment (all)*Female	-0.38	
	(0.98)	
Self-esteem=1		1.01
		(1.01)
Self-esteem=1*Female		-1.60
		(1.25)
Professional training=1		0.85
		(1.86)
Professional training=1*Female		0.21
		(2.03)
Self-esteem and professional training =1		-0.05
		(1.10)
Self-esteem and training professional=1*Female		0.32
		(1.29)

Observation	265	265
R2	0.34	0.35
Control Group Mean	14.64	14.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Employment

Table 20 presents the results of the heterogeneity analysis in the third block of results. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there is no gender-heterogeneous effects on self-reported employment.

Table 20: Heterogeneous effects by gender - Employment

	Self-reported employment	
	(1)	(2)
Treatment (all)	0.00	
	(0.09)	
Female	-0.00	-0.01
	(0.07)	(0.07)
Treatment (all)*Female	-0.02	
	(0.11)	
Self-esteem=1		-0.03
		(0.12)
Self-esteem=1*Female		0.07
		(0.14)
Professional training=1		0.18***
		(0.06)
Professional training=1*Female		-0.18
		(0.12)

Self-esteem and professional training =1		-0.06 (0.15)
Self-esteem and training professional=1*Female		-0.06 (0.18)
Observation	227	227
R2	0.25	0.27
Control Group Mean	0.77	0.77

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Heterogeneity due to living alone

Self-esteem and personal empowerment

Table 21 and **Table 22** show the effect of interventions if the person lives alone (type of household) on the results of self-esteem and personal empowerment. The interventions did not have a significant differential effect on any of the outcomes, except for the degree of autonomy. While a significant impact is observed in the Treatment 3 group for those who do not live alone, the impact is significantly greater at 2.99 points (p<0.05) for participants who live alone.

Table 21: Heterogeneous effects by type of housing – Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.48		0.69	
	(1.13)		(1.80)	
Living alone	-1.77	-1.87	-3.31	-3.35
	(1.56)	(1.57)	(2.81)	(2.83)
Treatment (all)* Living alone	1.25		3.60	
	(2.07)		(3.54)	
Self-esteem=1		0.16		0.49

		(1.65)		(2.18)
Self-esteem =1* Living		-0.69		-1.68
Alone		(2.70)		(4.27)
Professional		2.50		3.08
training=1		(1.57)		(2.98)
Professional		1.01		0.54
training=1*Living alone		(2.74)		(4.99)
Self-esteem and professional		-0.28		-0.43
training =1		(1.61)		(2.66)
Self-esteem and training		3.00		5.84
professional=1*Living Alone		(3.37)		(5.11)
Observation	266	266	267	267
R2	0.34	0.35	0.35	0.36
Control Group Mean	36.19	36.19	77.45	77.45

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 22: Heterogeneous effects by type of housing – Self-esteem and personal empowerment (secondary outcomes)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.45		-0.26		0.37	
	(0.61)		(0.64)		(0.75)	
Living alone	-1.16	-1.17	-0.52	-0.53	-0.35	-0.38
	(0.94)	(0.95)	(0.84)	(0.85)	(1.15)	(1.16)
Treatment (all)*	0.13		0.95		-0.59	
Living alone	(1.20)		(1.12)		(1.47)	

Self-esteem=1		0.79		-0.34		0.00
		(0.70)		(0.77)		(0.99)
Self-esteem =1* Living		-0.97		-0.66		-118
Alone		(1.44)		(1.47)		(1.90)
Professional		1.04		0.67		1.13
training=1		(1.14)		(1.10)		(1.11)
Professional		-0.30		0.58		-0.84
training=1*Living alone		(1.81)		(1.58)		(2.11)
Self-esteem and professional		-0.26		-0.69		0.36
training =1		0.93)		(0.87)		(1.02)
Self-esteem and training		1.68		2.99**		0.13
professional=1*Living Alone		(1.76)		(1.51)		(2.05)
Observation	266	266	267	267	266	266
R2	0.31	0.32	0.33	0.35	0.34	0.35
Control Group Mean	21.36	21.36	21.79	21.79	30.65	30.65

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Planned behavior and proactivity

Table 23 - **Table 27** show the effect of interventions by type of dwelling on the results of planned behavior and proactivity. There is no significant heterogeneity in the effects, with the exception, in **Tables 24** and **26**, that the third intervention group had different effects depending on the type of house in the results of the subindex of well-founded optimism and the subindex of motivation. In particular, the third intervention group had no significant impact for those participants who did not live alone, while it had a significantly greater impact by 4.49 points (p<0.05) and by 1.19 points (p<0.05), respectively, for those participants who lived alone.

Table 23: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	4.66	
	(2.85)	
Living alone	-3.98	-4.08
	(4.69)	(4.73)
Treatment (all)*	5.18	
Living alone	(6.54)	
Self-esteem=1		6.03*
		(3.48)
Self-esteem =1* Living		2.31
Alone		(10.78)
Professional		5.49
training=1		(5.16)
Professional		7.64
training=1*Living alone		(9.37)
Self-esteem and professional		2.59
training =1		(3.93)
Self-esteem and training		5.35
professional=1*Living Alone		(7.34)
Observation	267	267
R2	0.54	0.55
Control Group Mean	129.73	129.73

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 24: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.30		0.80		1.30	
	(1.57)		(0.85)		(0.99)	
Living alone	-0.66	-0.66	-0.61	-0.58	0.49	0.45
	(2.12)	(2.13)	(1.12)	(1.12)	(1.39)	(1.40)
Treatment (all)*	1.59		0.86		0.12	
Living alone	(3.20)		(1.68)		(2.01)	
Self-esteem=1		3.97**		1.20		2.57**
		(1.94)		(1.05)		(1.29)
Self-esteem =1* Living		-2.04		-0.98		-2.02
Alone		(5.54)		(2.83)		(3.39)
Professional		2.81		1.01		1.39
training=1		(2.74)		(1.33)		(1.75)
Professional		1.70		-0.27		1.85
training=1*Living alone		(4.51)		(2.36)		(2.65)
Self-esteem and professional		0.09		0.20		-0.18
training =1		(2.17)		(1.18)		(1.37)
Self-esteem and training		5.67		4.49**		0.60

professional=1*Living Alone		(4.53)		(2.21)		(2.77)
Observation	266	266	266	266	265	265
R2	0.55	0.55	0.48	0.49	0.47	0.48
Control Group Mean	71.47	71.47	32.08	32.08	39.70	39.70

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 25: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	1.30		1.04		0.18	
	(1.25)		(0.96)		(0.42)	
Living alone	-1.50	-1.60	-1.33	-1.39	-0.01	-0.05
	(2.01)	(2.02)	(1.61)	(1.62)	(0.56)	(0.56)
Treatment (all)*	1.87		1.18		0.57	
Living alone	(2.91)		(2.29)		(0.84)	
Self-esteem=1		0.92		0.60		0.11
		(1.63)		(1.23)		(0.57)
Self-esteem =1* Living		3.09		1.93		1.12
Alone		(4.13)		(3.30)		(1.10)
Professional		0.76		0.02		0.68
training=1		(2.17)		(1.82)		(0.66)
Professional		5.14		3.95		1.14
training=1*Living alone		(4.41)		(3.36)		(1.46)

Self-esteem and professional training =1		2.02 (1.70)		2.07 (1.29)		-0.00 (0.56)
Self-esteem and training professional=1*Living Alone		-3.09 (3.81)		-2.21 (3.30)		-1.18 (0.92)
Observation	267	267	267	267	263	263
R2	0.50	0.51	0.49	0.50	0.39	0.41
Control Group Mean	42.21	42.21	33.15	33.15	9.12	9.12

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 26: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 3)

	IFS subscale		**Behavior subindex**		**Motivation subindex**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.64 (0.56)		0.43 (0.36)		0.18 (0.30)	
Living alone	0.10 (0.71)	0.09 (0.72)	0.60 (0.52)	0.57 (0.53)	-0.39 (0.36)	-0.37 (0.36)
Treatment (all)* Living alone	0.15 (0.94)		-0.32 (0.67)		0.37 (0.50)	
Self-esteem=1		0.73 (0.67)		0.28 (0.45)		0.43 (0.35)
Self-esteem =1* Living Alone		-0.52 (1.51)		-0.80 (0.99)		0.18 (0.74)
Professional training=1		1.59** (0.81)		1.14** (0.53)		0.44 (0.46)

Professional training=1*Living alone		-0.50 (1.25)		-0.28 (0.84)		-0.31 (0.75)
Self-esteem and professional training =1		-0.00 (0.77)		0.21 (0.49)		-0.24 (0.39)
Self-esteem and training professional=1*Living Alone		1.17 (1.05)		-0.11 (0.84)		1.19** (0.57)
Observation	266	266	266	266	265	265
R2	0.39	0.40	0.31	0.33	0.40	0.41
Control Group Mean	16.73	16.73	10.20	10.20	6.58	6.58

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 27: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	-0.08	
	(0.54)	
Living alone	-1.01	-1.08
	(0.75)	(0.76)
Treatment (all)* Living alone	1.17	
	(1.13)	
Self-esteem=1		-0.38
		(0.69)
Self-esteem =1* Living		0.69

Alone		(1.52)
Professional training=1		0.38 (0.90)
Professional training=1*Living alone		2.23 (1.56)
Self-esteem and professional training =1		0.02 (0.62)
Self-esteem and training professional=1*Living Alone		0.39 (1.84)
Observation	265	265
R2	0.34	0.35
Control Group Mean	14.64	14.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Employment

For the third block of results, in none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects of living only in the self-reported employment indicator.

Table 28: Heterogeneous effects by type of housing – Employability (main results)

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.04 (0.06)	
Living alone	0.01 (0.09)	0.01 (0.09)
Treatment (all)*Living alone	0.09	

	(0.11)	
Self-esteem=1		0.01 (0.07)
Self-esteem=1*Living alone		0.04 (0.13)
Professional training=1		-0.03 (0.11)
Professional training=1 *Living alone		0.20 (0.14)
Self-esteem and professional training=1		-0.09 (0.10)
Self-esteem and professional training=1*Living alone		-0.01 (0.19)
Observation	227	227
R2	0.26	0.27
Control Group Mean	0.77	0.77

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Heterogeneity due to not having worked in the last year

Self-esteem and personal empowerment

Table 29 and **Table 30** show the effect of the interventions depending on whether the person worked in the last year on the results of the self-esteem and personal empowerment block. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects according to this characteristic on the results of the personal empowerment block of self-esteem.

Table 29: Heterogeneous effects of not having worked in the last year – Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.16		1.95	
	(1.51)		(2.64)	
No work	-0.74	-0.85	0.27	0.24
	(1.39)	(1.41)	(2.73)	(2.76)
Treatment (all)*	0.90		-2.102	
No work	(1.90)		(3.24)	
Self-esteem=1		0.43		0.14
		(2.61)		(3.61)
Self-esteem=1*No		-0.24		-0.64
Worked		(2.97)		(4.30)
Professional		2.54*		2.89
training =1		(1.47)		(2.85)
Professional training=1		-0.96		-0.50
*No work		(2.67)		(5.25)
Self-esteem and		-2.24		2.98
professional training=1		(2.29)		(3.57)
Self-esteem and training		4.10		-3.65
professional=1*No work		(2.78)		(4.47)
Observation	258	258	259	259
R2	0.37	0.38	0.34	0.34
Control Group Mean	36.42	36.42	77.57	77.57

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 30: Heterogeneous effects of not having worked in the last year – Self-esteem and personal empowerment (secondary results)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.25		0.05		0.70	
(all)	(0.76)		(0.86)		(0.93)	
No work	-0.93	-0.90	-0.05	-0.08	0.16	0.15
	(0.72)	(0.72)	(0.83)	(0.84)	(0.98)	(0.99)
Treatment (all)*	-0.02		-0.04		-1.13	
No work	(1.00)		(1.07)		(1.28)	
Self-esteem=1		-0.31		-0.60		0.15
		(1.15)		(1.12)		(1.40)
Self-esteem=1*No		1.01		0.21		-0.99
Worked		(1.38)		(1.39)		(1.84)
Professional		0.49		1.84		0.32
training =1		(0.95)		(1.12)		(1.04)
Professional training=1		-0.05		0.03		0.80
*No work		(1.86)		(1.68)		(2.10)
Self-esteem and		0.60		002		1.65
professional training=1		(1.07)		(1.17)		(1.28)
Self-esteem and training professional=1		-1.04		0.10		-2.29
*No work		(1.45)		(1.46)		(1.67)
Observation	258	258	259	259	258	258
R2	0.32	0.32	0.32	0.33	0.34	0.34

Control Group Mean	21.52	21.52	21.71	21.71	30.72	30.72

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Planned behavior and proactivity

Table 31 - **Table 35** reports heterogeneous effects depending on whether the person worked in the last year on the planned behavior and the results of proactivity. Specifically, there are two significant differential effects for this block. In **Table 34**, Treatment 3 has a significant effect on the behavioral sub-index of 1.13 points (p<0.05) on those who had worked before, while the effect is significantly smaller at 1.66 points (p<0.05) for those who had not worked. On the other hand, **Table 35** shows a positive and significant effect of vocational training of 2.88 points (p<0.01) on the perception of the environment about the need to find employment for those individuals who had worked in the last year. For those who had not worked, the effect of Treatment 2 is significantly lower by 3.35 points (p<0.05).

Table 31: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	9.87**	
(all)	(4.30)	
No work	2.29	2.45
	(4.67)	(4.71)
Treatment (all)*	-6.29	
No work	(5.53)	
Self-esteem=1		8.02
		(7.01)
Self-esteem=1*No		-1.78
Worked		(8.18)
Professional		11.29**
training =1		(5.34)

Professional training=1		-5.50
*No work		(8.74)
Self-esteem and		10.51**
professional training=1		(4.90)
Self-esteem and training professional=1		-11.28
*No work		(6.86)
Observation	259	259
R2	0.53	0.54
Control Group Mean	129.74	129.74

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 32: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary outcomes - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	3.53*		1.20		2.16*	
(all)	(2.00)		(1.11)		(1.20)	
No work	-1.01	-0.88	-1.55	-1.53	0.80	0.88
	(2.18)	(2.19)	(1.12)	(1.13)	(1.32)	(1.32)
Treatment (all)*	1.10		-0.12		-1.24	
No work	(2.78)		(1.47)		(1.72)	
Self-esteem=1		3.37		1.20		1.98
		(3.41)		(1.84)		(2.02)
Self-esteem=1*No		0.84		-0.05		0.48
Worked		(4.17)		(2.19)		(2.61)

Professional training =1		3.67 (2.57)		0.36 (1.36)		3.11** (1.56)
Professional training=1 *No work		-0.28 (4.53)		1.16 (2.39)		-1.65 (2.74)
Self-esteem and professional training=1		3.75 (2.48)		1.96 (1.40)		1.62 (1.47)
Self-esteem and training professional=1 *No work		-3.92 (3.61)		-1.19 (1.89)		-2.83 (2.24)
Observation	258	258	258	258	257	257
R2	0.54	0.54	0.49	0.49	0.46	0.47
Control Group Mean	71.44	71.44	32.10	32.10	39.67	39.67

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 33: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary results - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all) (all)	3.58** (1.79)		2.89** (1.46)		0.32 (0.53)	
No work	2.33 (1.80)	2.35 (1.82)	1.94 (1.42)	1.95 (1.44)	0.36 (0.49)	0.36 (0.49)
Treatment (all)* No work	-2.87 (2.36)		-2.55 (1.88)		0.16 (0.70)	
Self-esteem=1		2.12 (2.86)		1.36 (2.38)		0.26 (0.77)

Self-esteem=1*No		-0.60		-0.41		0.30
Worked		(3.46)		(2.75)		(1.00)
Professional		4.99**		3.76*		1.07
training =1		(2.47)		(1.96)		(0.90)
Professional training=1		4.20		-4.46		0.51
*No work		(3.75)		(2.99)		(1.13)
Self-esteem and		3.78*		3.63**		-0.32
professional training=1		(2.26)		(1.84)		(0.63)
Self-esteem and training professional=1		-4.08		-3.47		0.12
*No work		(3.17)		(2.54)		(0.92)
Observation	259	259	259	259	255	255
R2	0.49	0.49	0.48	0.49	0.38	0.39
Control Group Mean	42.22	42.22	33.18	33.18	9.11	9.11

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 34: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary results - 3)

	IFS subscale		**Behavior subindex**		**Motivation subindex**	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	1.05*		0.84**		0.19	
(all)	(0.60)		(0.41)		(0.32)	
No work	-0.93	-0.92	0.17	0.17	-1.06***	-1.05***
	(0.64)	(0.65)	(0.47)	(0.47)	(0.31)	(0.31)
Treatment (all)*	-0.67		-0.91		0.19	
No work	(0.82)		(0.57)		(0.42)	

Self-esteem=1		0.81		0.22		0.56
		(0.95)		(0.57)		(0.42)
Self-esteem=1*No		0.81		0.22		0.56
Worked		(0.95)		(0.65)		(0.45)
Professional		1.33*		1.22***		0.12
training =1		(0.74)		(0.46)		(0.46)
Professional training=1		0.38		-0.09		0.41
*No work		(1.15)		(0.82)		(0.66)
Self-esteem and		1.05		1.13**		-0.12
professional training=1		(0.74)		(0.50)		(0.42)
Self-esteem and training professional=1		-1.33		-1.66**		0.31
*No work		(1.12)		(0.76)		(0.60)
Observation	258	258	258	258	257	257
R2	0.45	0.46	0.35	0.37	0.45	0.46
Control Group Mean	16.77	16.77	10.19	10.19	6.64	6.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 35: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary outcomes - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.83	
(all)	(0.78)	
No work	1.23*	1.18*
	(0.70)	(0.71)

Treatment (all)*	-0.79	
No work	(0.93)	
Self-esteem=1		-0.34
		(1.10)
Self-esteem=1*No		0.47
Worked		(1.30)
Professional		2.88***
training =1		(0.97)
Professional training=1		-3.35**
*No work		(1.32)
Self-esteem and		0.14
professional training=1		(1.10)
Self-esteem and training professional=1		0.04
*No work		(1.24)
Observation	257	257
R2	0.34	0.36
Control Group Mean	14.59	14.59

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Employment

Finally, **Table 36** presents the results of the analysis of employment heterogeneity. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects according to the fact that the person has worked in the last year on self-reported employment.

Table 36: Heterogeneous effects of not having worked in the last year – Employment (main results)

treatment group. All data presented in this figure refer to the survey conducted prior to the intervention (baseline). For each observable variable, the difference between the mean of that

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.01	
(all)	(0.09)	
No work	0.28***	0.28***
	(0.08)	(0.08)
Treatment (all)*	-0.03	
No work	(0.10)	
Self-esteem=1		0.05
		(0.12)
Self-esteem=1*No		-0.07
Worked		(0.13)
Professional		0.10
training =1		(0.13)
Professional training=1		-0.10
*No work		(0.15)
Self-esteem and		-0.17
professional training=1		(0.14)
Self-esteem and training professional=1		0.09
*No work		(0.16)
Observation	223	223
R2	0.32	0.34
Control Group Mean	0.76	0.76

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Balance between experimental groups.

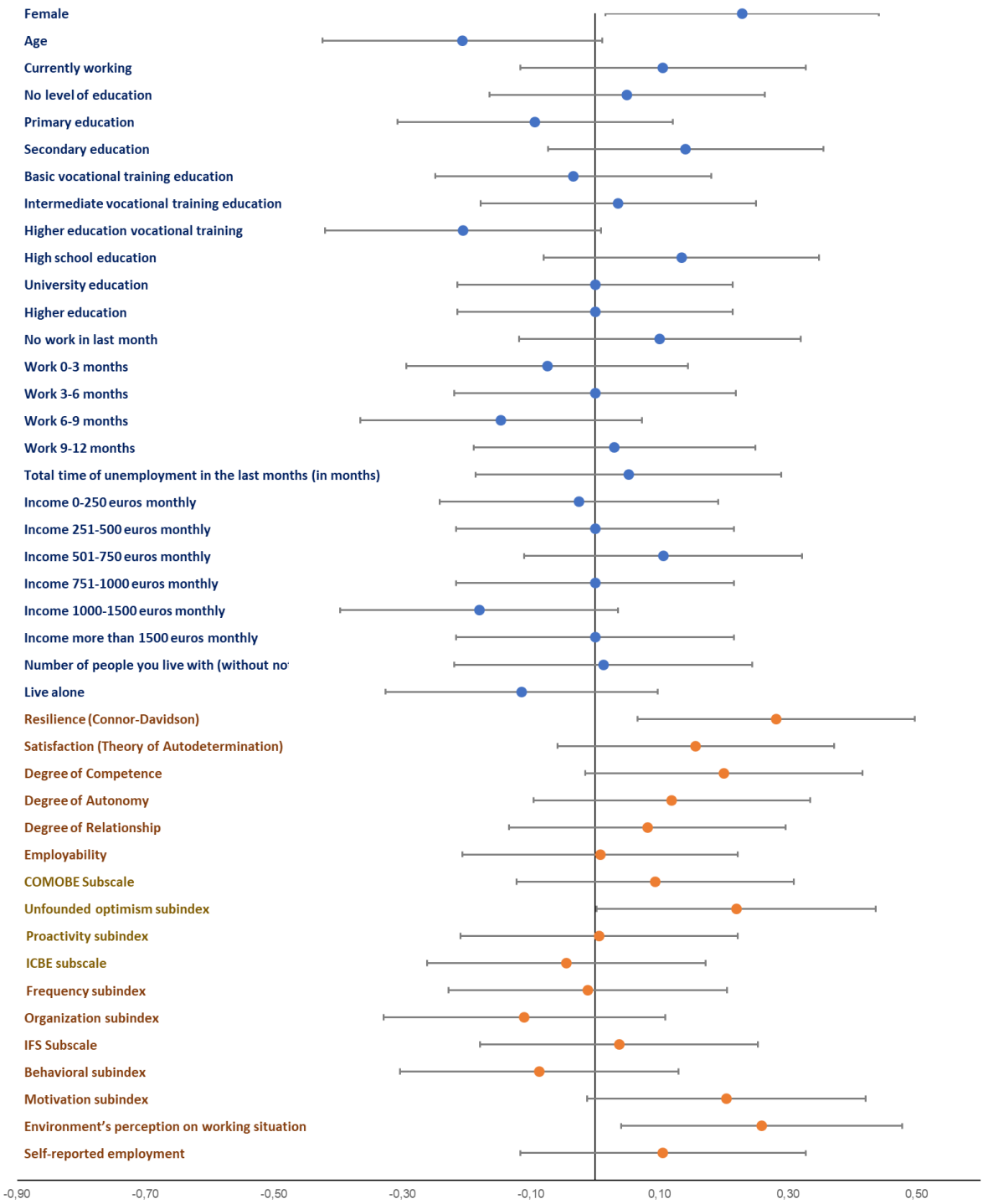
variable in the treatment and control group is represented by a point and focused on it, the 95% confidence interval of that difference. A confidence interval containing zero, i.e., the vertical axis, will indicate that the mean difference between groups is not statistically significant or, in other words, is not statistically different from zero, meaning that the intervention groups are balanced. In case the confidence interval of the mean difference does not contain zero, the difference is statistically significant meaning the groups are unbalanced in this characteristic.

Figure 6 shows that the treatment and control groups are not statistically different in most variables. However, there are some important exceptions, especially regarding sociodemographic variables with respect to gender, age, higher education, and vocational training. On the other hand, in relation to the outcome variables, differences in resilience, degree of competence, sub-index of well-founded optimism, motivation and the perception of the environment on the work situation stand out. 59% of the participants in the control group are women, compared to 70% in the treatment group. This difference is significant at 5%. Regarding educational level, 9% of the participants in the control group had a higher vocational education, compared to 4% in the treatment group, where this difference is also significant at 5%.

Regarding the variables and outcome indices, the participants in the control group showed a resilience of 36.38 points and those in the treatment group 39.02 points, where this difference is significant at 5%. In addition, there are also differences with respect to the degree of competition, significant at 10%. Regarding the variables contained in the second block of planned behavior and proactivity, there are differences with respect to the sub-index of well-founded optimism and the sub-index of motivation, both significant at 10%. Finally, the difference in the perceptions of the environment on the employment situation stands out, significant at 5%.

Encouragingly, our analysis demonstrates no statistically significant differences between the treatment and control groups across most socio-demographic and outcome variables, indicating a high degree of balance. This balanced distribution of covariates enhances the credibility of our subsequent analyses and strengthens the validity of our study's findings. However, to prevent the previous imbalances from biasing the estimates, the variables for which significant differences have been found will be included as controls in the estimated regressions. Additional controls will also be incorporated to improve the precision of the estimates, including gender, age, education level, time worked in the last year, monthly income, living alone, and all the outcome variables at baseline.

Figure 6: Standardized mean difference between treatment group and control group (95% confidence interval)



Note: the sociodemographic variables are shown in blue, and the outcome indicators are shown in orange

4.3 Degree of participation and attrition by groups

The group that signs the informed consent group constitutes the experimental sample randomly assigned to the control and treatment groups. However, both participation in the program and response to the initial and final surveys are voluntary. On one hand, it is convenient to analyze the degree of participation in the program, since the estimation of results will refer to the average effects of offering it, given the degree of participation. For example, if participation in treatment activities is low, the treatment and control groups will be very similar, being more difficult to find an effect. On the other hand, this section tests whether the non-completion of the final survey by some of the participants reduces the comparability of the treatment and control groups after the intervention, if the response rate is different between groups or according to the demographic characteristics of the participants in each group.

Degree of participation

As for the members of the three experimental groups, their adherence to the treatments was very high, with almost complete attendance at all the training sessions in almost all cases. In this sense, there were only 15 days of absences in total for all the people who were part of the experimental groups, which were also totally distributed among them, so that each person in these groups only missed 0.11 days of theory or practice of their corresponding training.

Attrition by groups

365 participants signed the informed consent to participate in the project. Of those 365, 311 (85.21%) answered the endline survey. Therefore, the attrition level is 14.79%.

To analyze whether attrition introduces bias to our estimations, it is essential to explore two key aspects: (1) whether attrition varies between the intervention groups, termed differential attrition, and (2) whether the characteristics of the individuals who dropped out differ significantly from those of the individuals who did not, referred to as selective attrition.

To test whether the differential attrition between groups is significant, equations (1) and (2) are estimated, where the $Attrition_i$ is an indicator variable that takes the value 1 if an individual i has attrited and 0 if not, $Treatment_i$ is the treatment indicator, G_1 is the indicator for the self-esteem treatment, G_2 is the indicator for the labour training treatment, and G_3 is the indicator for the combined treatment. The standard errors are clustered at the family level, as it was the unit of randomisation.

$$Attrition_i = \alpha + \beta\, Treatment_i + \varepsilon_i \qquad (1)$$

$$Attrition_i = \alpha + \beta_1\, G1_i + \beta_2\, G2_i + \beta_3\, G3_i + \varepsilon_i \qquad (2)$$

Columns (1) and (2) in **Table 4** present the results of equations (1) and (2). The attrition rate is 9% ($p<0.05$) higher when participants belong to any treatment group, while, specifically, it is 5% (no

significant), 11% (p<0.1) and 12% (p<0.05) higher when they take part in T1, T2 and T3, respectively compared to the control group.

Next, the analysis checks whether the attritors in treatment and control groups differ in any of the observable characteristics or outcomes at baseline. The third column in **Table 5** shows the estimation results of equation (3), where X_k are observable characteristics and δ_k the parameters of interest. A significant $\delta_k$coefficient would indicate that attritors from the control and the treatment groups significantly differ in characteristic X_k.

$$Attrition_i = \alpha + \beta\, Treatment_i + \Sigma_k \beta_k X_{ik} + \Sigma_k \delta_k X_{ik} \times Treatment + \varepsilon_i \quad (3)$$

A significant interaction term is observed for some variables, indicating selective attrition. A higher attrition rate is observed for all treatment groups (p<0.1), but a lower difference in attrition rate is observed for the treatment groups compared to the control when participants are female (p<0.05). Also, participants that belong to the first four categories of monthly income have a lower difference in attrition rate between the treatment groups and the control group (p<0.05) than those with the highest income level. The presence of selective attrition may bias our estimates by leaving us with an unbalanced sample. For this reason, in further research, Lee Bounds will be estimated to analyze the consistency of the results.

Table 4: Attrition analysis

	Differential attrition		**Selective attrition**
	(1)	(2)	(3)
Treatment (all)	0.09**		
	(0.04)		
Self-esteem		0.05	
		(0.05)	
Professional training		0.11*	
		(0.06)	
Self-esteem and professional training		0.12**	
		(0.05)	
Treatment (all)			0.64*
			(0.33)
Treatment (all)*Female			-0.14**
			(0.07)
Treatment (all)*Age			-0.00
			(0.00)
Treatment (all)*Currently Working			-0.01
			(0.15)
Treatment (all)*No education			-0.10
			(0.16)

	Differential attrition		Selective attrition
	(1)	(2)	(3)
Treatment (all)*Primary education			0.07
			(0.11)
Treatment (all)*Secondary education			-0.04
			(0.10)
Treatment (all)*Basic vocational training			0.03
			(0.14)
Treatment (all)*Intermediate vocational training			0.10
			(0.12)
Treatment (all)*Higher vocational training			0.09
			(0.11)
Treatment (all)*High school education			0.03
			(0.14)
Treatment (all)*University education			0.20
			(0.17)
Treatment (all)*Did not work			-0.07
			(0.14)
Treatment (all)*Work 0-3 months			-0.00
			(0.13)
Treatment (all)*Work 3-6 months			-0.22
			(0.17)
Treatment (all)*Work 6-9 months			0.26
			(0.31)
Treatment (all)*Total time unemployment last month			0.00
			(0.00)
Treatment (all)*Earned 0-250 euros monthly			-0.59**
			(0.25)
Treatment (all)*Eared 251-500 euros monthly			-0.61**
			(0.26)
Treatment (all)*Earned 501-750 euros monthly			-0.56**
			(0.25)
Treatment (all)*Earned 751-1000 Euros monthly			-0.68**
			(0.27)
Treatment (all)*Living alone			0.07
			(0.08)
Constant	0.10***	0.10***	-0.97**
	(0.02)	(0.02)	(0.41)
Observation	365	365	231
R2	0.02	0.02	0.24

	Differential attrition		Selective attrition
	(1)	(2)	(3)
Media	0.10	0.10	0.06

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; p < 0.01.

5 Evaluation results

Randomization of the experimental sample to the control and treatment groups ensures that, with a sufficiently large sample, the groups are statistically comparable and therefore any differences observed after the intervention can be causally associated with the treatment. Econometric analysis provides, in essence, this comparison. However, it has the advantages of allowing other variables to be included to gain precision in estimates and of providing confidence intervals for estimates. The econometric analysis carried out and the estimated regressions are presented in this section, as well as the analysis of the results obtained.

5.1 Description of Econometric Analysis: Estimated Regressions

The regression model specified to estimate the causal effect of an intervention in a randomized experiment estimates the difference in the average of the outcome of interest between the treatment and control groups after the intervention. This difference represents the impact of the project. This estimate captures the causal impact of the intervention since the randomization procedure ensures that, on average, the treatment and control groups are comparable, and any difference observed in the outcomes between the two groups can be attributed to the intervention.

The analysis will focus on the intent to treat (ITT) estimate, which compares those individuals assigned to treatment groups with those assigned to control. This parameter captures the impact of offering a program, instead of receiving it, in the presence of partial compliance. This is generally the policy-relevant estimate of the program's impact since, in most cases, compliance with the program cannot be enforced.

ITT impacts will be measured through ANCOVA specifications, which include the value of the outcome at baseline as a regressor, along with a set of controls [16]. The inclusion of these regressors allows us to improve the accuracy of the estimates, as well as to avoid imbalances across groups bias our estimated effects.

[16] Controls include all the imbalanced outcome variables at baseline.

In a first econometric specification, the three treatment groups are combined into a single group and compared to the control group. In particular, T_i is an indicator that takes value 1 if individual i is assigned to groups T1, T2, or T3 (i.e., the self-esteem intervention, the professional training intervention or both). The specification estimated aims to obtain the average difference in means in the post-treatment period between the treatment group and the control group:

$$Y_{i,post} = \alpha + \beta T_i + Y_{i,pre} + X_i{}' \delta + u_i \quad (4)$$

where $Y_{i,post}$ is the outcome of interest measured at endline at the individual level; $Y_{i,pre}$ is the outcome of interest measured at baseline; and X'_i is a vector of controls. β will capture the impact of being assigned to any of the treatment groups

This analysis will also examine whether the effects are different depending on whether individuals received treatments: $G1, G2\ o\ G3$

$$Y_{i,post} = \alpha + \beta_1 G1_i + \beta_2 G2_i + \beta_3 G3_i + Y_{i,pre} + X_i{}' \delta + u_i \quad (5)$$

β_1 will capture the impact of being assigned to the self-esteem intervention, β_2 the impact of the professional training intervention only, and β_3 the effect of both interventions jointly. The comparison between β_3 and $\beta_1 + \beta_2$ will allow us to analyze if there are complementarities or synergies in offering both interventions together. Standard errors are always clustered at the family level, as it was the unit of randomization.

Alternatively, impacts will be measured by intent to treat (ITT) impacts through the comparison of means between groups without adding any controls and including controls (the unbalanced variables obtained in the balance tests), but not the indicator at the beginning of the study.

5.2 Analysis of the results

5.2.1 Primary and secondary outcomes

This section presents the results of the evaluation on the main and secondary indicators, following the structure of the evaluation scheme.

1. Self-esteem and personal empowerment

Table 5 shows the impact of the intervention on the main outcomes of self-esteem and personal empowerment. A positive effect of 7% (coefficient of 2.62, p<0.05) on the resilience index (Connor-Davidson) was presented for the vocational training intervention group compared to the control group. However, no significant effect on satisfaction or secondary outcomes was found in this block of indicators (see **Table 5**).

Table 5: Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.82		1.11	
	(0.97)		(1.64)	
Self-esteem		0.09		0.24
		(1.39)		(1.95)
Professional training		2.62**		2.83
		(1.25)		(2.39)
Self-esteem and professional training		0.44		0.96
		(1.44)		(2.38)
Observation	266	266	267	267
R2	0.34	0.35	0.34	0.35
Control group mean	36.19	36.19	77.45	77.45
T3=T1 (p-value)		0.84		0.77
T3=T2 (p-value)		0.20		0.52
T3=T1=T2 (p-value)		0.25		0.60
T3=T1+T2 (p-value)		0.29		0.54

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

Table 6: Self-esteem and personal empowerment (secondary outcomes)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.47		0.02		0.19	
	(0.54)		(0.54)		(0.65)	
Self-esteem		0.59		-0.44		-0.29
		(0.63)		(0.66)		(0.84)
Professional Training		0.75		0.85		0.73
		(0.87)		(0.79)		(0.97)
Self-esteem & professional training		0.13		-0.02		0.37
		(0.82)		(0.77)		(0.90)
Observation	266	266	267	267	266	266
R2	0.30	0.30	0.33	0.34	0.34	0.34
Control group mean	21.36	21.36	21.79	21.79	30.65	30.65
T3=T1 (p-value)		0.59		0.60		0.51

T3=T2 (p-value)	0.56	0.37	0.75
T3=T1=T2 (p-value)	0.82	0.33	0.63
T3=T1+T2 (p-value)	0.32	0.71	0.96

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

2. Planned behavior and proactivity

Table 7 - **Table 11** shows the results of Planned Behavior and Proactivity, from Ajzen's TCP (1985). For the main outcome (see **Table 7**), the employability index increases by 4.73% (coefficient of 6.13, p<0.05) when they receive an intervention. When the effect is analyzed by treatment, this effect is due to an increase in the employability index by 6.07% (coefficient of 7.87, p<0.05) when participants receive the vocational training intervention and by 5.3% (coefficient of 6.88, p<0.1) when they receive the self-esteem intervention.

For secondary outcomes, **Table 8** provides a significant impact of 3.85% (coefficient of 2.75, p<0.05) in the COMOBE scale of job-seeking behavior for all treatments compared to the control group, and this effect is an increase of 5.04% for the self-esteem group (coefficient of 3.6, p<0.1). Also, the proactivity subindex shows a positive impact of 5.44% (coefficient of 2.16, p<0.1) for the professional training group and 5.4% (coefficient of 2.14, p<0.1) for the self-esteem intervention group compared to the control group.

Table 9 presents a significant positive effect on the organization subindex of 12.06% in the professional training group in comparison with the control group (coefficient of 1.10, p<0.1).

Table 10 shows that the interventions led to a positive and significant increase in the IFS subscale of 8.54% (coefficient of 1.43, p<0.05) for those receiving vocational training treatment, compared to the comparison group.

Table 11 also shows a positive impact of 10.88% (coefficient of 1.11, p<0.01) on the behavior subindex when participants take part in the professional training. Lastly, **Table 11** does not provide any significant result for any intervention on the self-perceived employability.

Table 7: Planned behavior and proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	6.13**	
	(2.57)	
Self-esteem		6.88*
		(3.49)
Professional training		7.87*

	Employability	
	(1)	(2)
		(4.17)
Self-esteem and professional training		4.01
		(3.39)
Observation	267	267
R2	0.54	0.54
Control group mean	129.73	129.73
T3=T1 (p-value)		0.49
T3=T2 (p-value)		0.41
T3=T1=T2 (p-value)		0.67
T3=T1+T2 (p-value)		0.07

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

Table 8: Planned behavior and proactivity (secondary outcomes - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.75**		1.05		1.35	
	(1.35)		(0.76)		(0.84)	
Self-esteem		3.60*		1.02		2.14*
		(1.84)		(1.01)		(1.19)
Professional training		3.44		0.89		2.16*
		(2.13)		(1.12)		(1.29)
Self-esteem professional training		1.34		1.18		-0.08
		(1.92)		(1.05)		(1.18)
Observation	266	266	266	266	265	265
R2	0.55	0.55	0.48	0.48	0.47	0.47
Control group mean	71.47	71.47	32.08	32.08	39.70	39.70
T3=T1 (p-value)		0.34		0.90		0.14
T3=T2 (p-value)		0.42		0.83		0.15
T3=T1=T2 (p-value)		0.58		0.98		0.24
T3=T1+T2 (p-value)		0.08		0.66		0.03

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

Table 9: Planned behavior and proactivity (secondary results - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	1.84		1.37		0.36	
	(1.13)		(0.89)		(0.35)	
Self-esteem		1.76		1.14		0.39
		(1.54)		(1.19)		(0.49)
Professional training		2.44		1.27		1.10*
		(1.91)		(1.52)		(0.60)
Self-esteem and professional training		1.50		1.70		-0.25
		(1.52)		(1.20)		(0.47)
Observation	267	267	267	267	263	263
R2	0.50	0.50	0.49	0.49	0.39	0.40
Control group mean	42.21	42.21	33.15	33.15	9.12	9.12
T3=T1 (p-value)		0.89		0.71		0.28
T3=T2 (p-value)		0.66		0.80		0.05
T3=T1=T2 (p-value)		0.91		0.93		0.15
T3=T1+T2 (p-value)		0.32		0.73		0.04

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

Table 10: Planned behavior and proactivity (secondary outcomes - 3)

	IFS Subscale		Behavioral subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.69		0.36		0.28	
	(0.44)		(0.30)		(0.24)	
Self-esteem		0.62		0.08		0.49
		(0.57)		(0.38)		(0.30)
Formation professional		1.43**		1.11***		0.29
		(0.60)		(0.39)		(0.36)

	IFS Subscale		Behavioral subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Self-esteem and training professional		0.25		0.16		0.03
		(0.62)		(0.41)		(0.32)
Observation	266	266	266	266	265	265
R2	0.39	0.40	0.31	0.32	0.40	0.40
Control group mean	16.73	16.73	10.20	10.20	6.58	6.58
T3=T1 (p-value)		0.60		0.85		0.21
T3=T2 (p-value)		0.09		0.04		0.52
T3=T1=T2 (p-value)		0.22		0.05		0.46
T3=T1+T2 (p-value)		0.05		0.9		0.15

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

Table 11: Planned behavior and proactivity (secondary outcomes - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.25	
	(0.48)	
Self-esteem		-0.16
		(0.61)
Vocational training		1.06
		(0.75)
Self-esteem and training professional		0.16
		(0.61)
Observation	265	265
R2	0.34	0.34
Control group mean	14.64	14.64
T3=T1 (p-value)		0.64
T3=T2 (p-value)		0.26
T3=T1=T2 (p-value)		0.31
T3=T1+T2 (p-value)		0.46

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

3. Employment

Table 12 presents the results corresponding to the employment block, which contains the results on self-reported employment. No significant effect was found from any intervention group. Employment outcomes may require longer interventions or observing participants for a longer period after the program, so that the improvements in resilience and employability (organization, motivation, and behavior) can have an impact on their labor market insertion.

Table 12: Employment (main results)

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.01	
	(0.05)	
Self-esteem		0.02
		(0.06)
Professional training		0.05
		(0.08)
Self-esteem and professional training		-0.09
		(0.08)
Observation	227	227
R2	0.25	0.26
Control group mean	0.77	0.77
T3=T1 (p-value)		0.17
T3=T2 (p-value)		0.17
T3=T1=T2 (p-value)		0.31
T3=T1+T2 (p-value)		0.17

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01.

5.2.2 Heterogeneity analysis[17]

An analysis of heterogeneity of effects has been conducted based on participants' characteristics. Specifically, it examines whether the effects vary by gender, household typology (living alone), and employment status in the previous year. To do this, regressions identical to those defined in the section on the analysis of primary and secondary outcomes were specified, incorporating the variable for which heterogeneous effects are estimated and its interaction with the treatment indicator.

[17] In the **Heterogeneity analysis appendix** A detailed analysis of the heterogeneous effects according to gender, type of household and employment situation in the last year is presented.

Regarding gender, no differential effects of the treatment were observed in terms of self-esteem and personal empowerment. Similarly, no heterogeneous effects by gender were found in planned and proactive behavior or in self-reported employment.

Regarding household type, the interventions did not produce a significant differential effect on self-esteem and personal empowerment outcomes, except for the degree of autonomy, where a significantly greater effect of 2.99 points was detected for participants living alone and receiving Treatment 3. Additionally, there were no significant differential impacts on planned and proactive behavior outcomes overall. However, the third intervention group exhibited different effects based on household type in the well-founded optimism and motivation subindices. No heterogeneous effects were observed in self-reported employment for participants living alone.

Finally, no heterogeneous effects were found based on whether the participant worked in the last year on the outcomes of personal empowerment and self-esteem. However, differential impacts were observed on planned behavior and proactivity. Specifically, Treatment 3 had a significant effect on the behavioral sub-index, increasing it by 1.13 points for those who had worked previously. Additionally, vocational training showed a positive and significant effect of 2.88 points on the participants' perception of the environment regarding their need to find employment, for those who had worked in the last year. Conversely, there were no heterogeneous effects on self-reported employment based on whether the participant had worked in the last year.

6 Conclusions of the evaluation

Unemployment in Spain is one of the highest in the OECD. According to INE (2023), the unemployment rate in Spain stood at 11.76% in the last quarter of 2023, which indicates an urgent need for public policies to address the labor market in a more efficient manner. In fact, long-term unemployment in Spain is also a concerning issue, with long-term unemployment affecting 40.3% of all the unemployed (INE, 2023). This can create situations of helplessness at the motivational and psychological level that might be difficult to reverse.

This study has provided valuable insights into the effects of an integral inclusion program for unemployed people at risk of poverty or social exclusion, including professional training and sessions to improve self-esteem and promote personal empowerment in the municipality of Santander (Spain).

The Randomized Controlled Trial encompassed a sample of 365 individuals. Within this initial sample, 63 participants were randomly assigned to the self-esteem intervention group, 47 were randomly assigned to the labor training treatment and 68 were assigned to a third treatment group that included both, while the remaining 177 formed the comparison group.

The study presented a attrition rate of 14.79%, especially high in those receiving T2 and T3, with differences between intervention groups being statistically significant with $p<0.1$ and $p<0.05$, respectively. In addition, the analysis reveals lower attrition within the treatment group compared to the control group for those who are female ($p<0.05$) and for those who belong to the first four

categories of monthly income (p<0.05). Selective attrition may bias the estimates, which is a limitation of this study. Selective attrition can skew our estimates, which is a limitation of this study. In future research should focus on robustness checks with the Lee Bounds methodology.

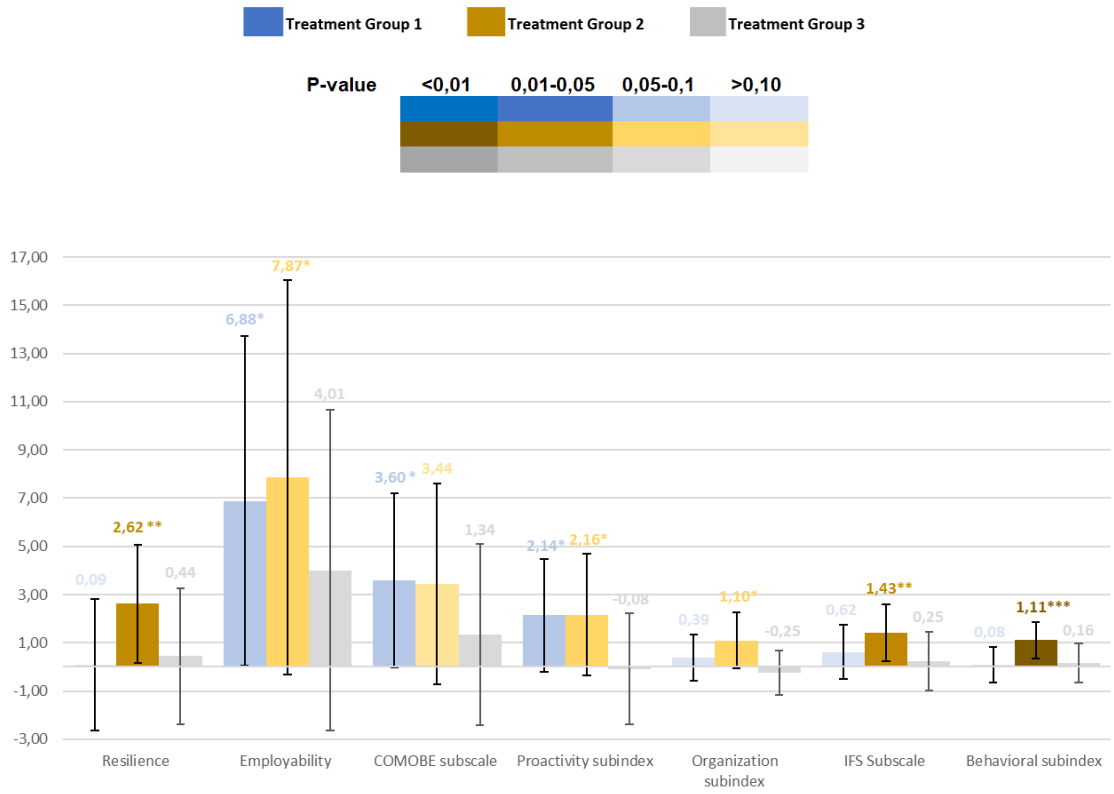
As for the primary outcomes, the interventions showed a positive impact in the indexes of resilience (Connor-Davidson) (p<0.1) in the block of self-esteem and personal empowerment, and a positive impact on the employability index (p<0.05) in the block of planned behavior and proactivity. Both effects are found in the groups receiving the professional training. Also, for this last indicator, it increases by 4.73% (coefficient of 6.16, p<0.05) and by 5.1% (coefficient of 6.64, p<0.1) when they receive the self-esteem intervention.

For the secondary outcomes, significant effects are only found in the block of planned behavior and proactivity, where professional training had a positive impact on the proactivity, subindex (p<0.,1), the organization subindex (p<0.1), the motivation and willingness to look for and find a job (IFS subscale) (p<0.05) and the behavior subindex (p<0.05). In addition, the self-esteem intervention had a positive impact on the COMOBE subscale (p<0.05) and the proactivity subindex (p<0.1).

The results remain robust under two alternative econometric specifications: one without any controls or the outcome at baseline, and the other including controls but not the outcome at baseline. The results from these specifications are very similar both in terms of significant effects and their size and they can be found in the appendix.

The following figure shows the main results obtained in the analysis.

Figure 7: Effect of the intervention on the main indicators



The analysis explored heterogeneity by gender, house typology (living alone) and having worked in the previous year. Generally, the treatment effects do not display significant heterogeneity by gender, with the only exception being the secondary indicator of competence, for which the second treatment has a greater effect among women ($p<0.1$).

Regarding heterogeneity by house typology, the results only showed variable impacts on optimism ($p<0.05$) and motivation to get a job ($p<0.05$). The third intervention group had no significant impact on these variables for those participants who did not live alone, while it had a significantly greater impact for those who lived alone. In addition, the third treatment had a significantly greater effect ($p<0.05$) on the degree of autonomy for those participants who lived alone.

Finally, for the analysis of heterogeneity for having worked at any time in the previous year, the combined treatment had a significant and positive effect on those who had worked before, while the effect was significantly smaller for those who had not worked in the behavioral sub-index ($p<0.05$). In addition, a positive and significant effect of vocational training on the perception of the environment about their need to find a job is observed for those individuals who have worked in the last year. For those who had not worked, the effect of the Treatment 2 group was significantly smaller ($p<0.05$).

In conclusion, the results of this study highlight the potential of projects addressing poverty and social exclusion by improving labor market insertion through professional training interventions and self-esteem empowerment. In Spain, where unemployment is one of the highest in the Eurozone and is

also characterized by a high presence of long-term unemployment, it is vitally important to introduce policies that help to promote a lower unemployment rate and a greater insertion of individuals in a vulnerable situation into the labor market.

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Appendix

Economic and regulatory management

1. Introduction

Within the framework of the National Recovery, Transformation, and Resilience Plan, the General Secretariat for Inclusion (SGI) of the Ministry of Inclusion, Social Security, and Migration is significantly involved in Component 23, "New public policies for a dynamic, resilient, and inclusive labor market," framed in policy area VIII, "New care economy and employment policies."

Investment 7 "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme" is one of the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new inclusion model based on the Minimum Income Scheme (MIS), which reduces income inequality and poverty rates. To achieve this objective, the development of pilot projects has been proposed, among others, for the implementation of social inclusion pathways with autonomous communities, local entities, and Third Sector of Social Action entities, as well as with the different social agents.

Royal Decree 938/2021, of October 26, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation, and Resilience Plan[18], contributed to meeting milestone 350 for the first quarter of 2022 as outlined in the Council's Implementing Decision: "Improve the rate of access to the Minimum Income Scheme, and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and entities of the Third Sector of Social Action to conduct the pathways. The objectives of these partnership agreements are: (i) improve the MIS access rate; ii) increase the effectiveness of the MIS through inclusion policies". Likewise, along with Royal Decree 378/2022, of May 17[19], "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and entities of the Third Sector of Social Action to implement pilot projects to support the socio-economic inclusion of the beneficiaries of MIS through itineraries" contributed to compliance with

[18]Royal Decree 938/2021, of October 26, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 109,787,404 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2021-17464). It can be consulted at the following link: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464.

[19] Royal Decree 378/2022, of May 17, 2022, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of 102,036,066 euros, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2022-8124). It can be consulted at the following link: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-8124.

monitoring indicator number 351.1 in the first quarter of 2023, linked to the Operational Arrangements document[20].

Furthermore, following the execution and evaluation of each of the subsidized pilot projects, an assessment will be conducted to evaluate the coverage, effectiveness, and success of the minimum income schemes. The publication of this evaluation, which will include specific recommendations to improve the access rate to the benefit and enhance the effectiveness of social inclusion policies, contributes to the achievement of milestone 351 of the Recovery, Transformation, and Resilience Plan scheduled for the first quarter of 2024.

In accordance with Article 3 of Royal Decree 938/2021, dated October 26, subsidies will be granted through a resolution accompanied by an agreement of the head of the Ministry of Inclusion, Social Security and Migration as the competent authority for granting them, without prejudice to the existing delegations of competence in the matter, upon request of the beneficiary organizations.

On September 19, 2022, the Santander City Council was notified of the Resolution of the General Secretariat for Inclusion and Social Welfare Objectives and Policies granting a subsidy of 827,800 euros to the Santander City Council and, on September 26, 2022, an Agreement was signed between the General State Administration, through the General Secretariat for Inclusion and Social Welfare Objectives and Policies and the Santander City Council for the implementation of a social inclusion project within the framework of the Recovery, Transformation and Resilience Plan, which was published in the "Official State Gazette" on 7 October 2022 (BOE no. 241).[21]

2. Timeframe of the intervention

Article 17(1) of Royal Decree 378/2022 of 17 May 2022 established that the period for the implementation of the pilot projects of social inclusion itineraries subject to the subsidies provided for in this text shall not exceed the deadline of November 30, 2023, while the evaluation shall not be extend beyond March 31, 2024, in order to meet the milestones, set by the Recovery, Transformation, and Resilience Plan regarding social inclusion policies.

Within this general timeframe, the implementation begins the week **of October 16, 2023**, with the start of the intervention, continuing it until **November 30, 2023**, the date on which the trainings end, and subsequently developing dissemination and evaluation tasks of the project until **March 31, 2024**.

3. Relevant Agents

Among the relevant agents in the implementation of the project are:

[20] Decision of the European Commission approving the document 'Operational Provisions of the Recovery, Transformation and Resilience Plan', which can be consulted at the following link: https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/hacienda/Documents/2021/101121-CountersignedESFirstCopy.pdf.

[21] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-16390

- The **Santander City Council**, as the beneficiary entity and coordinator of the project.
- The **Ministry of Inclusion, Social Security and Migration (MISSM)** as the sponsor of the project, and as the main responsible for the RCT evaluation process. The General Secretariat for Inclusion (SGI) assumes the following commitments:
  a) Assist the beneficiary entity in the design of the activities to be carried out for the implementation and monitoring of the object of the grant, as well as for the profiling of the potential participants of the pilot project.
  b) Design the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary entity.
  c) Evaluate the pilot project in coordination with the beneficiary entity.
- **Cantabria Hotel and Catering Business Association**, contracted for hospitality-related internship training: waiter and kitchen assistant
- **Regional Association of Cleaning Companies of Cantabria**, contracted for training in practices related to civil cleaning.
- **Alpe Formación SLU,** contracted to carry out training courses aimed at improving self-esteem.
- The **research group in Socio-Emotional Development, Well-being, and Education (IDSEBE) of** the **University of Cantabria (UC),** mainly collaborating in the design of the study, in the development of the evaluation instruments, in the supervision of the collection of pre and post data, as well as in the preparation of reports. They carried out specific work on the selection of the theoretical models and study variables, the selection of standardized assessment instruments, the pilot study with these instruments and their adaptation, the preparation of the final questionnaire and the collection and coding of the data.
- **CEMFI and J-PAL Europe**, as scientific and academic institutions that support MISSM in the design and RCT evaluation.

Heterogeneity analysis

This section presents analyses of the heterogeneity of the effects according to participants' characteristics. Specifically, it is analyzed whether the effects differ by gender, household typology (living alone) and not having worked in the previous year. To do so, the regressions follow identical specification to those in the previous section, but adding the variable for which the heterogeneous effects are to be estimated and the interaction of this variable with the treatment indicator.

Tables **13-20** assess whether the intervention has a differential impact on female participants compared to male participants. **Tables 20-28**, on the other hand, provide the differential impact of the intervention depending on whether the participants live alone. Finally, **Tables 29-36** present the possible impacts of the intervention on participants who did not work in the last year compared to those who worked at some point.

Heterogeneity by gender

1. Self-esteem and personal empowerment

Table 13 and **Table 14** report the heterogeneous effects in self-esteem and personal empowerment main, and secondary outcomes by gender. The coefficient of interest in this case corresponds to the interaction between treatment and the binary variable indicating gender (Treatment*Female), which captures the different effect on females compared to males. The coefficient of the treatment dummy estimates the effect of the treatment on males.

Table 13 and **Table 14** show that all coefficients capturing differential treatment effects are not significantly different from zero, suggesting that the treatment has no differential impact on females with respect to males in terms of self-esteem and personal empowerment. However, there is an exception to the degree of competence, where a greater impact of the intervention on this indicator is observed for women who have received the intervention from vocational training, with the impact being significantly greater at 3.25 points ($p<0.1$) for women in this treatment than for men.

Table 13: Gender-heterogeneous effects - Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	1.70		0.01	
	(1.66)		(2.11)	
Female	0.22	0.23	0.70	0.73
	(1.30)	(1.31)	(1.99)	(2.01)
Treatment (all)* Female	-1.32		1.66	
	(2.03)		(2.84)	

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Self-esteem=1		2.34		-1.11
		(2.41)		(2.78)
Self-esteem=1*Female		-3.14		2.00
		(2.92)		(3.59)
Professional training=1		2.50		-1.61
		(2.37)		(4.78)
Professional training=1*Female		-0.03		5.86
		(2.78)		(5.59)
Self-esteem and professional training =1		0.83		1.66
		(2.19)		(2.63)
Self-esteem and training professional=1*Female		-0.64		-0.99
		(2.77)		(3.96)
Observation	266	266	267	267
R2	0.34	0.35	0.35	0.35
Control Group Mean	36.19	36.19	77.45	77.45

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 14: Gender-heterogeneous effects - Self-esteem and personal empowerment (secondary outcomes)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	-0.45		0.24		0.14	
	(0.74)		(0.73)		(0.98)	
Female	-0.67	-0.17	0.87	0.88	0.72	0.73
	0.67)	(0.68)	(0.66)	(0.66)	(0.86)	(0.87)
Treatment (all)*Female	1.39		-0.34		0.08	
	(1.00)		(0.94)		(1.26)	
Self-esteem=1		-0.38		-0.23		-0.69
		(0.99)		(1.06)		(1.22)
Self-esteem=1*Female		1.45		-0.31		0.57
		(1.23)		(1.30)		(1.58)
Professional training=1		-1.68		0.40		-0.40
		(1.28)		(1.39)		(2.44)
Professional		3.25*		0.52		1.46

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
training=1*Female		(1.67)		(1.70)		(2.67)
Self-esteem and professional training =1		-0.00 (1.02)		0.52 (1.70)		1.46 (2.67)
Self-esteem and training professional=1*Female		0.27 (1.45)		-0.92 (1.31)		-1.09 (1.63)
Observation	266	266	267	267	266	266
R2	0.31	0.31	0.33	0.34	0.34	0.35
Control Group Mean	21.36	21.36	21.79	21.79	30.65	30.65

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

2. Planned behavior and proactivity

Table 15 - **Table 19** presents the heterogeneous effects by gender on planned behavior and the results of proactivity. In none of the cases is the interaction coefficient significantly different from zero.

Table 15: Heterogeneous effects by gender - Planned behavior and proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	2.59 (4.24)	
Female	1.00 (3.55)	0.98 (3.58)
Treatment (all)*Female	5.39 (5.35)	
Self-esteem=1		-0.11 (8.27)
Self-esteem=1*Female		9.78 (9.04)
Professional training=1		8.54 (7.99)
Professional training=1*Female		-0.24 (9.52)
Self-esteem and professional training =1		2.12 (4.00)
Self-esteem and training		3.05

	Employability	
	(1)	(2)
professional=1*Female		(6.04)
Observation	267	267
R2	0.54	0.55
Control group Mean	129.73	129.73

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 16: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity sub-index	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.37		0.82		1.35	
	(2.33)		(1.34)		(1.30)	
Female	1.34	1.32	1.33	1.33	0.28	0.26
	(1.76)	(1.77)	(0.99)	(1.00)	(1.05)	(1.05)
Treatment (all)*Female	0.58		0.34		-0.00	
	(2.92)		(1.58)		(1.73)	
Self-esteem=1		1.88		0.71		0.68
		(4.36)		(2.23)		(2.31)
Self-esteem=1*Female		2.33		0.47		1.90
		(4.84)		(2.48)		(2.74)
Professional training=1		2.51		-0.57		3.00
		(4.42)		(2.61)		(2.10)
Professional training=1*Female		1.24		1.91		-1.09
		(5.06)		(2.88)		(2.60)
Self-esteem and professional training =1		2.66		1.51		1.14
		(2.60)		(1.62)		(1.56)
Self-esteem and training professional=1*Female		-2.01		-0.48		-1.90
		(3.58)		(2.02)		(2.22)
Observation	266	266	266	266	265	265
R2	0.55	0.55	0.48	0.48	0.47	0.48
Control Group Mean	71.47	71.47	32.08	32.08	39.70	39.70

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 17: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.00		-0.19		0.109	
	(1.90)		(1.54)		(0.61)	
Female	0.79	0.79	0.52	0.54	0.33	0.33
	(1.51)	(1.53)	(1.21)	(1.22)	(0.45)	(0.45)
Treatment (all)*Female	2.79		2.36		0.40	
	(2.34)		(1.88)		(0.74)	
Self-esteem=1		-1.97		-2.03		-0.05
		(3.40)		(2.78)		(1.10)
Self-esteem=1*Female		5.17		4.40		0.61
		(3.73)		(3.03)		(1.22)
Professional training=1		5.93*		4.57*		1.42
		(3.24)		(2.67)		(0.98)
Professional training=1*Female		-4.14		-3.92		-0.38
		(3.98)		(3.23)		(1.21)
Self-esteem and professional training =1		-0.93		-0.68		-0.40
		(2.14)		(1.81)		(0.68)
Self-esteem and training professional=1*Female		3.76		3.66		0.24
		(2.93)		(2.38)		(0.91)
Observation	267	267	267	267	263	263
R2	0.50	0.51	0.49	0.50	0.39	0.40
Control Group Mean	42.21	42.21	33.15	33.15	9.12	9.12

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 18: Heterogeneous effects by gender - Planned behavior and proactivity (secondary outcomes - 3)

	IFS Subscale		Behavior subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.11		0.16		-0.05	
	(0.66)		(0.44)		(0.38)	
Female	-0.02	-0.02	0.11	0.11	-0.07	-0.07
	(0.64)	(0.64)	(0.44)	(0.44)	(0.33)	(0.33)

Treatment (all)*Female	0.90		0.31		0.51	
	(0.86)		(0.59)		(0.47)	
Self-esteem=1		-0.32		-0.54		0.21
		(1.04)		(0.63)		(0.61)
Self-esteem=1*Female		1.35		0.85		0.42
		(1.24)		(0.79)		(0.68)
Professional training=1		0.93		1.45***		-0.62
		(1.26)		(0.48)		(0.72)
Professional training=1*Female		0.93		-0.4		1.21
		(1.26)		(0.71)		(0.83)
Self-esteem and professional training =1		0.16		0.19		-0.04
		(0.81)		(0.55)		(0.45)
Self-esteem and training professional=1*Female		0.18		-0.04		0.14
		(1.14)		(0.76)		(0.61)
Observation	266	266	266	266	265	265
R2	0.39	0.40	0.31	0.33	0.40	0.40
Control Group Mean	16.73	16.73	10.20	10.20	6.58	6.58

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 19: Gender-heterogeneous effects - Planned behavior and proactivity (secondary outcomes - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.50	
	(0.80)	
Female	-0.15	-0.15
	(0.62)	(0.63)
Treatment (all)*Female	-0.38	
	(0.98)	
Self-esteem=1		1.01
		(1.01)
Self-esteem=1*Female		-1.60
		(1.25)
Professional training=1		0.85
		(1.86)
Professional training=1*Female		0.21
		(2.03)

	Environment's perception on working situation	
	(1)	(2)
Self-esteem and professional training =1		-0.05
		(1.10)
Self-esteem and training professional=1*Female		0.32
		(1.29)
Observation	265	265
R2	0.34	0.35
Control Group Mean	14.64	14.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

3. Employment

Table 20 presents the results of the heterogeneity analysis in the third block of results. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there is no gender-heterogeneous effects on self-reported employment.

Table 20: Heterogeneous effects by gender - Employment

	Self-reported employment	
	(1)	(2)
Treatment (all)	0.00	
	(0.09)	
Female	-0.00	-0.01
	(0.07)	(0.07)
Treatment (all)*Female	-0.02	
	(0.11)	
Self-esteem=1		-0.03
		(0.12)
Self-esteem=1*Female		0.07
		(0.14)
Professional training=1		0.18***
		(0.06)
Professional training=1*Female		-0.18
		(0.12)
Self-esteem and professional training =1		-0.06
		(0.15)
Self-esteem and training professional=1*Female		-0.06
		(0.18)
Observation	227	227

	Self-reported employment	
	(1)	(2)
R2	0.25	0.27
Control Group Mean	0.77	0.77

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Heterogeneity due to living alone

1. Self-esteem and personal empowerment

Table 21 and **Table 22** show the effect of interventions if the person lives alone (type of household) on the results of self-esteem and personal empowerment. The interventions did not have a significant differential effect on any of the outcomes, except for the degree of autonomy. While a significant impact is observed in the Treatment 3 group for those who do not live alone, the impact is significantly greater at 2.99 points (p<0.05) for participants who live alone.

Table 21: Heterogeneous effects by type of housing – Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.48		0.69	
	(1.13)		(1.80)	
Living alone	-1.77	-1.87	-3.31	-3.35
	(1.56)	(1.57)	(2.81)	(2.83)
Treatment (all)* Living alone	1.25		3.60	
	(2.07)		(3.54)	
Self-esteem=1		0.16		0.49
		(1.65)		(2.18)
Self-esteem =1* Living Alone		-0.69		-1.68
		(2.70)		(4.27)
Professional training=1		2.50		3.08
		(1.57)		(2.98)
Professional training=1*Living alone		1.01		0.54
		(2.74)		(4.99)
Self-esteem and professional training =1		-0.28		-0.43
		(1.61)		(2.66)
Self-esteem and training		3.00		5.84

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
professional=1*Living Alone		(3.37)		(5.11)
Observation	266	266	267	267
R2	0.34	0.35	0.35	0.36
Control Group Mean	36.19	36.19	77.45	77.45

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 22: Heterogeneous effects by type of housing – Self-esteem and personal empowerment (secondary outcomes)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.45		-0.26		0.37	
	(0.61)		(0.64)		(0.75)	
Living alone	-1.16	-1.17	-0.52	-0.53	-0.35	-0.38
	(0.94)	(0.95)	(0.84)	(0.85)	(1.15)	(1.16)
Treatment (all)* Living alone	0.13		0.95		-0.59	
	(1.20)		(1.12)		(1.47)	
Self-esteem=1		0.79		-0.34		0.00
		(0.70)		(0.77)		(0.99)
Self-esteem =1* Living Alone		-0.97		-0.66		-118
		(1.44)		(1.47)		(1.90)
Professional training=1		1.04		0.67		1.13
		(1.14)		(1.10)		(1.11)
Professional training=1*Living alone		-0.30		0.58		-0.84
		(1.81)		(1.58)		(2.11)
Self-esteem and professional training =1		-0.26		-0.69		0.36
		0.93)		(0.87)		(1.02)
Self-esteem and training professional=1*Living Alone		1.68		2.99**		0.13
		(1.76)		(1.51)		(2.05)
Observation	266	266	267	267	266	266
R2	0.31	0.32	0.33	0.35	0.34	0.35
Control Group Mean	21.36	21.36	21.79	21.79	30.65	30.65

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

2. Planned behavior and proactivity

Table 23 - **Table 27** show the effect of interventions by type of dwelling on the results of planned behavior and proactivity. There is no significant heterogeneity in the effects, with the exception, in **Tables 24** and **26**, that the third intervention group had different effects depending on the type of house in the results of the subindex of well-founded optimism and the subindex of motivation. In particular, the third intervention group had no significant impact for those participants who did not live alone, while it had a significantly greater impact by 4.49 points ($p<0.05$) and by 1.19 points ($p<0.05$), respectively, for those participants who lived alone.

Table 23: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	4.66	
	(2.85)	
Living alone	-3.98	-4.08
	(4.69)	(4.73)
Treatment (all)* Living alone	5.18	
	(6.54)	
Self-esteem=1		6.03*
		(3.48)
Self-esteem =1* Living Alone		2.31
		(10.78)
Professional training=1		5.49
		(5.16)
Professional training=1*Living alone		7.64
		(9.37)
Self-esteem and professional training =1		2.59
		(3.93)
Self-esteem and training professional=1*Living Alone		5.35
		(7.34)
Observation	267	267
R2	0.54	0.55
Control Group Mean	129.73	129.73

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 24: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.30		0.80		1.30	
	(1.57)		(0.85)		(0.99)	
Living alone	-0.66	-0.66	-0.61	-0.58	0.49	0.45
	(2.12)	(2.13)	(1.12)	(1.12)	(1.39)	(1.40)
Treatment (all)* Living alone	1.59		0.86		0.12	
	(3.20)		(1.68)		(2.01)	
Self-esteem=1		3.97**		1.20		2.57**
		(1.94)		(1.05)		(1.29)
Self-esteem =1* Living Alone		-2.04		-0.98		-2.02
		(5.54)		(2.83)		(3.39)
Professional training=1		2.81		1.01		1.39
		(2.74)		(1.33)		(1.75)
Professional training=1*Living alone		1.70		-0.27		1.85
		(4.51)		(2.36)		(2.65)
Self-esteem and professional training =1		0.09		0.20		-0.18
		(2.17)		(1.18)		(1.37)
Self-esteem and training professional=1*Living Alone		5.67		4.49**		0.60
		(4.53)		(2.21)		(2.77)
Observation	266	266	266	266	265	265
R2	0.55	0.55	0.48	0.49	0.47	0.48
Control Group Mean	71.47	71.47	32.08	32.08	39.70	39.70

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 25: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	1.30		1.04		0.18	
	(1.25)		(0.96)		(0.42)	
Living alone	-1.50	-1.60	-1.33	-1.39	-0.01	-0.05
	(2.01)	(2.02)	(1.61)	(1.62)	(0.56)	(0.56)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)*	1.87		1.18		0.57	
Living alone	(2.91)		(2.29)		(0.84)	
Self-esteem=1		0.92		0.60		0.11
		(1.63)		(1.23)		(0.57)
Self-esteem =1* Living		3.09		1.93		1.12
Alone		(4.13)		(3.30)		(1.10)
Professional		0.76		0.02		0.68
training=1		(2.17)		(1.82)		(0.66)
Professional		5.14		3.95		1.14
training=1*Living alone		(4.41)		(3.36)		(1.46)
Self-esteem and						
professional		2.02		2.07		-0.00
training =1		(1.70)		(1.29)		(0.56)
Self-esteem and						
training		-3.09		-2.21		-1.18
professional=1*Living						
Alone		(3.81)		(3.30)		(0.92)
Observation	267	267	267	267	263	263
R2	0.50	0.51	0.49	0.50	0.39	0.41
Control Group Mean	42.21	42.21	33.15	33.15	9.12	9.12

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 26: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 3)

	IFS subscale		Behavior subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.64		0.43		0.18	
	(0.56)		(0.36)		(0.30)	
Living alone	0.10	0.09	0.60	0.57	-0.39	-0.37
	(0.71)	(0.72)	(0.52)	(0.53)	(0.36)	(0.36)
Treatment (all)*	0.15		-0.32		0.37	
Living alone	(0.94)		(0.67)		(0.50)	
Self-esteem=1		0.73		0.28		0.43
		(0.67)		(0.45)		(0.35)
Self-esteem =1* Living		-0.52		-0.80		0.18
Alone		(1.51)		(0.99)		(0.74)
Professional		1.59**		1.14**		0.44

	IFS subscale		Behavior subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
training=1		(0.81)		(0.53)		(0.46)
Professional		-0.50		-0.28		-0.31
training=1*Living alone		(1.25)		(0.84)		(0.75)
Self-esteem and professional		-0.00		0.21		-0.24
training =1		(0.77)		(0.49)		(0.39)
Self-esteem and training		1.17		-0.11		1.19**
professional=1*Living Alone		(1.05)		(0.84)		(0.57)
Observation	266	266	266	266	265	265
R2	0.39	0.40	0.31	0.33	0.40	0.41
Control Group Mean	16.73	16.73	10.20	10.20	6.58	6.58

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 27: Heterogeneous effects by type of dwelling – Planned behavior and personal proactivity (secondary results - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	-0.08	
	(0.54)	
Living alone	-1.01	-1.08
	(0.75)	(0.76)
Treatment (all)*	1.17	
Living alone	(1.13)	
Self-esteem=1		-0.38
		(0.69)
Self-esteem =1* Living		0.69
Alone		(1.52)
Professional		0.38
training=1		(0.90)
Professional		2.23
training=1*Living alone		(1.56)
Self-esteem and professional		0.02
training =1		(0.62)
Self-esteem and training		0.39
professional=1*Living Alone		(1.84)

	Environment's perception on working situation	
	(1)	(2)
Observation	265	265
R2	0.34	0.35
Control Group Mean	14.64	14.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

3. Employment

For the third block of results, in none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects of living only in the self-reported employment indicator.

Table 28: Heterogeneous effects by type of housing – Employability (main results)

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.04	
	(0.06)	
Living alone	0.01	0.01
	(0.09)	(0.09)
Treatment (all)*Living alone	0.09	
	(0.11)	
Self-esteem=1		0.01
		(0.07)
Self-esteem=1*Living alone		0.04
		(0.13)
Professional training=1		-0.03
		(0.11)
Professional training=1 *Living alone		0.20
		(0.14)
Self-esteem and professional training=1		-0.09
		(0.10)
Self-esteem and professional training=1*Living alone		-0.01
		(0.19)
Observation	227	227
R2	0.26	0.27
Control Group Mean	0.77	0.77

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Heterogeneity due to not having worked in the last year

1. Self-esteem and personal empowerment

Table 29 and **Table 30** show the effect of the interventions depending on whether the person worked in the last year on the results of the self-esteem and personal empowerment block. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects according to this characteristic on the results of the personal empowerment block of self-esteem.

Table 29: Heterogeneous effects of not having worked in the last year – Self-esteem and personal empowerment (main results)

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.16		1.95	
	(1.51)		(2.64)	
No work	-0.74	-0.85	0.27	0.24
	(1.39)	(1.41)	(2.73)	(2.76)
Treatment (all)* No work	0.90		-2.102	
	(1.90)		(3.24)	
Self-esteem=1		0.43		0.14
		(2.61)		(3.61)
Self-esteem=1*No Worked		-0.24		-0.64
		(2.97)		(4.30)
Professional training =1		2.54*		2.89
		(1.47)		(2.85)
Professional training=1 *No work		-0.96		-0.50
		(2.67)		(5.25)
Self-esteem and professional training=1		-2.24		2.98
		(2.29)		(3.57)
Self-esteem and training professional=1*No work		4.10		-3.65
		(2.78)		(4.47)
Observation	258	258	259	259
R2	0.37	0.38	0.34	0.34
Control Group Mean	36.42	36.42	77.57	77.57

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 30: Heterogeneous effects of not having worked in the last year – Self-esteem and personal empowerment (secondary results)

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.25		0.05		0.70	
(all)	(0.76)		(0.86)		(0.93)	
No work	-0.93	-0.90	-0.05	-0.08	0.16	0.15
	(0.72)	(0.72)	(0.83)	(0.84)	(0.98)	(0.99)
Treatment (all)*	-0.02		-0.04		-1.13	
No work	(1.00)		(1.07)		(1.28)	
Self-esteem=1		-0.31		-0.60		0.15
		(1.15)		(1.12)		(1.40)
Self-esteem=1*No		1.01		0.21		-0.99
Worked		(1.38)		(1.39)		(1.84)
Professional		0.49		1.84		0.32
training =1		(0.95)		(1.12)		(1.04)
Professional training=1		-0.05		0.03		0.80
*No work		(1.86)		(1.68)		(2.10)
Self-esteem and		0.60		002		1.65
professional training=1		(1.07)		(1.17)		(1.28)
Self-esteem and training professional=1		-1.04		0.10		-2.29
*No work		(1.45)		(1.46)		(1.67)
Observation	258	258	259	259	258	258
R2	0.32	0.32	0.32	0.33	0.34	0.34
Control Group Mean	21.52	21.52	21.71	21.71	30.72	30.72

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

2. Planned behavior and proactivity

Table 31 - **Table 35** reports heterogeneous effects depending on whether the person worked in the last year on the planned behavior and the results of proactivity. Specifically, there are two significant differential effects for this block. In **Table 34**, Treatment 3 has a significant effect on the behavioral sub-index of 1.13 points (p<0.05) on those who had worked before, while the effect is significantly smaller at 1.66 points (p<0.05) for those who had not worked. On the other hand, **Table 35** shows a positive and significant effect of vocational training of 2.88 points (p<0.01) on the perception of the environment about the need to find employment for those individuals who had worked in the last year. For those who had not worked, the effect of Treatment 2 is significantly lower by 3.35 points (p<0.05).

Table 31: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (main results)

	Employability	
	(1)	(2)
Treatment (all)	9.87**	
(all)	(4.30)	
No work	2.29	2.45
	(4.67)	(4.71)
Treatment (all)*	-6.29	
No work	(5.53)	
Self-esteem=1		8.02
		(7.01)
Self-esteem=1*No		-1.78
Worked		(8.18)
Professional		11.29**
training =1		(5.34)
Professional training=1		-5.50
*No work		(8.74)
Self-esteem and		10.51**
professional training=1		(4.90)
Self-esteem and training professional=1		-11.28
*No work		(6.86)
Observation	259	259
R2	0.53	0.54
Control Group Mean	129.74	129.74

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 32: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary outcomes - 1)

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	3.53*		1.20		2.16*	
(all)	(2.00)		(1.11)		(1.20)	
No work	-1.01	-0.88	-1.55	-1.53	0.80	0.88
	(2.18)	(2.19)	(1.12)	(1.13)	(1.32)	(1.32)
Treatment (all)*	1.10		-0.12		-1.24	
No work	(2.78)		(1.47)		(1.72)	

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Self-esteem=1		3.37		1.20		1.98
		(3.41)		(1.84)		(2.02)
Self-esteem=1*No Worked		0.84		-0.05		0.48
		(4.17)		(2.19)		(2.61)
Professional training =1		3.67		0.36		3.11**
		(2.57)		(1.36)		(1.56)
Professional training=1 *No work		-0.28		1.16		-1.65
		(4.53)		(2.39)		(2.74)
Self-esteem and professional training=1		3.75		1.96		1.62
		(2.48)		(1.40)		(1.47)
Self-esteem and training professional=1 *No work		-3.92		-1.19		-2.83
		(3.61)		(1.89)		(2.24)
Observation	258	258	258	258	257	257
R2	0.54	0.54	0.49	0.49	0.46	0.47
Control Group Mean	71.44	71.44	32.10	32.10	39.67	39.67

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 33: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary results - 2)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all) (all)	3.58**		2.89**		0.32	
	(1.79)		(1.46)		(0.53)	
No work	2.33	2.35	1.94	1.95	0.36	0.36
	(1.80)	(1.82)	(1.42)	(1.44)	(0.49)	(0.49)
Treatment (all)* No work	-2.87		-2.55		0.16	
	(2.36)		(1.88)		(0.70)	
Self-esteem=1		2.12		1.36		0.26
		(2.86)		(2.38)		(0.77)
Self-esteem=1*No Worked		-0.60		-0.41		0.30
		(3.46)		(2.75)		(1.00)
Professional training =1		4.99**		3.76*		1.07
		(2.47)		(1.96)		(0.90)
Professional training=1 *No work		4.20		-4.46		0.51
		(3.75)		(2.99)		(1.13)

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Self-esteem and professional training=1		3.78*		3.63**		-0.32
		(2.26)		(1.84)		(0.63)
Self-esteem and training professional=1 *No work		-4.08		-3.47		0.12
		(3.17)		(2.54)		(0.92)
Observation	259	259	259	259	255	255
R2	0.49	0.49	0.48	0.49	0.38	0.39
Control Group Mean	42.22	42.22	33.18	33.18	9.11	9.11

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 34: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary results - 3)

	IFS subscale		Behavior subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all) (all)	1.05*		0.84**		0.19	
	(0.60)		(0.41)		(0.32)	
No work	-0.93	-0.92	0.17	0.17	-1.06***	-1.05***
	(0.64)	(0.65)	(0.47)	(0.47)	(0.31)	(0.31)
Treatment (all)* No work	-0.67		-0.91		0.19	
	(0.82)		(0.57)		(0.42)	
Self-esteem=1		0.81		0.22		0.56
		(0.95)		(0.57)		(0.42)
Self-esteem=1*No Worked		0.81		0.22		0.56
		(0.95)		(0.65)		(0.45)
Professional training =1		1.33*		1.22***		0.12
		(0.74)		(0.46)		(0.46)
Professional training=1 *No work		0.38		-0.09		0.41
		(1.15)		(0.82)		(0.66)
Self-esteem and professional training=1		1.05		1.13**		-0.12
		(0.74)		(0.50)		(0.42)
Self-esteem and training professional=1 *No work		-1.33		-1.66**		0.31
		(1.12)		(0.76)		(0.60)
Observation	258	258	258	258	257	257
R2	0.45	0.46	0.35	0.37	0.45	0.46
Control Group Mean	16.77	16.77	10.19	10.19	6.64	6.64

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table 35: Heterogeneous effects of not having worked in the last year – Planned behavior and proactivity (secondary outcomes - 4)

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.83	
(all)	(0.78)	
No work	1.23*	1.18*
	(0.70)	(0.71)
Treatment (all)*	-0.79	
No work	(0.93)	
Self-esteem=1		-0.34
		(1.10)
Self-esteem=1*No		0.47
Worked		(1.30)
Professional		2.88***
training =1		(0.97)
Professional training=1		-3.35**
*No work		(1.32)
Self-esteem and		0.14
professional training=1		(1.10)
Self-esteem and training professional=1		0.04
*No work		(1.24)
Observation	257	257
R2	0.34	0.36
Control Group Mean	14.59	14.59

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

3. Employment

Finally, **Table 36** presents the results of the analysis of employment heterogeneity. In none of the cases is the interaction coefficient significantly different from zero. Therefore, it is concluded that there are no heterogeneous effects according to the fact that the person has worked in the last year on self-reported employment.

Table 36: Heterogeneous effects of not having worked in the last year – Employment (main results)

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.01	
(all)	(0.09)	
No work	0.28***	0.28***
	(0.08)	(0.08)
Treatment (all)*	-0.03	
No work	(0.10)	
Self-esteem=1		0.05
		(0.12)
Self-esteem=1*No		-0.07
Worked		(0.13)
Professional		0.10
training =1		(0.13)
Professional training=1		-0.10
*No work		(0.15)
Self-esteem and		-0.17
professional training=1		(0.14)
Self-esteem and training professional=1		0.09
*No work		(0.16)
Observation	223	223
R2	0.32	0.34
Control Group Mean	0.76	0.76

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Balance between experimental groups

To evaluate the comparability of the treatment and control groups, balance tests were carried out on the variables collected during the reference survey. **Table 37** and **Table 38** present the results of these tests, with the mean value of the variable for each group and the p-value resulting from a mean difference test (using Student's t-statistic).

These tables show that, for most sociodemographic and outcome characteristics, the treatment and control groups do not present statistically significant differences. However, **Table 37** shows a statistically significant difference between the two groups in terms of gender ($p<0.05$), age ($p<0.1$) and having completed a higher vocational training degree ($p<0.05$). For the main results in **Table 38,** there is a statistically significant difference between both groups in the resilience index of Connor-Davidson ($p<0.05$), the degree of competence ($p<0.1$), the unfounded optimism subindex ($p<0.1$), the motivation subindex ($p<0.1$) and the subjective opinion on getting a job ($p<0.05$).

Encouragingly, the analysis demonstrates no statistically significant differences between the treatment and control groups across most socio-demographic and outcome variables, indicating a high degree of balance. This balanced distribution of covariates enhances the credibility of our subsequent analyses and strengthens the validity of our study's findings.

However, to prevent previous imbalances from skewing the estimates, variables for which significant differences have been found in the estimated regressions, and all outcome variables at baseline, are included as controls.

Table 37: Equilibrium contrasts between experimental groups: sociodemographic variables

	Mean				N/Clusters		
Variable	**Control**	**Treatment**	**Dif.**	**P-value**	**Total**	**Control**	**Treatment**
Woman	0.59	0.70	0.11	0.03**	339	174	165
	(0.26)	(0.22)			327	166	161
Age	47.30	45.05	-2.25	0.07*	325	163	162
	(124.92)	(117.23)			316	157	159
Currently working	0.15	0.19	0.04	0.36	311	156	155
	(0.14)	(0.16)			302	150	152
No level of education	0.04	0.05	0.01	0.57	334	168	166
	(0.04)	(0.05)			326	164	162
Primary education	0.26	0.22	-0.04	0.34	334	168	166
	(0.20)	(0.18)			326	164	162
Secondary education	0.21	0.27	0.06	0.23	334	168	166
	(0.17)	(0.20)			326	164	162
Basic vocational	0.10	0.09	-0.01	0.73	334	168	166

	Mean				N/Clusters		
Variable	**Control**	**Treatment**	**Dif.**	**P-value**	**Total**	**Control**	**Treatment**
Training education	(0.09)	(0.08)			326	164	162
Intermediate vocational training education	0.08	0.09	0.01	0.67	334	168	166
	(0.07)	(0.08)			326	164	162
Higher education vocational training	0.09	0.04	-0.05	0.05**	334	168	166
	(0.08)	(0.04)			326	164	162
High school education	0.14	0.19	0.05	0.28	334	168	166
	(0.13)	(0.16)			326	164	162
University education	0.05	0.05	0	0.82	334	168	166
	(0.05)	(0.05)			326	164	162
Higher education	0.02	0.02	0	0.72	334	168	166
	(0.02)	(0.02)			326	164	162
No work in last month	0.54	0.59	0.05	0.31	320	162	158
	(0.26)	(0.25)			311	156	155
Work 0-3 month	0.22	0.19	-0.03	0.57	320	162	158
	(0.18)	(0.16)			311	156	155
Work 3-6 month	0.06	0.06	0	0.95	320	162	158
	(0.06)	(0.06)			311	156	155
Work 6-9 month	0.06	0.03	-0.03	0.11	320	162	158
	(0.06)	(0.03)			311	156	155
Work 9-12 month	0.12	0.13	0.01	0.93	320	162	158
	(0.11)	(0.11)			311	156	155
Total time of unemployment in the last months (in months)	34.50	36.65	2.15	0.67	272	132	140
	(1760.25)	(1763.07)			265	126	139
Income 0-250 euros monthly	0.20	0.19	-0.01	0.92	329	173	156
	(0.17)	(0.16)			317	165	152
Income 251-500 euros monthly	0.27	0.27	0	0.96	329	173	156
	(0.21)	(0.20)			317	165	152
Income 501-750 euros monthly	0.31	0.36	0.05	0.37	329	173	156
	(0.23)	(0.24)			317	165	152
Income 751-1000 euros monthly	0.14	0.14	0	0.93	329	173	156
	(0.13)	(0.13)			317	165	152
Income 1001-1500 euros monthly	0.07	0.03	-0.04	0.14	329	173	156
	(0.07)	(0.03)			317	165	152
Income more than	0.01	0.01	0	0.94	329	173	156

	Mean				N/Clusters		
Variable	**Control**	**Treatment**	**Dif.**	**P-value**	**Total**	**Control**	**Treatment**
1500 euros monthly	(0,01)	(0,01)			317	165	152
Number of people you live with	1,69	1,71	0,02	0,94	286	143	143
(without not counting yourself)	(2,69)	(2,44)			277	137	140
Lives alone	0,28	0,23	-0,05	0,30	342	174	168
	(0,21)	(0,18)		0,03**	330	166	164

Note: Standard errors have been grouped at the family level. * p < 0.1; ** p < 0.05; p < 0.01.

Table 38: Equilibrium contrasts between experimental groups: outcome variables

	Mean				N/Clusters		
Variable	**Control**	**Treatment**	**Dif.**	**P-value**	**Total**	**Control**	**Treatment**
Block 1 – Self-esteem and personal empowerment							
Resilience (Connor-Davidson)	36,38	39,02	2,64	0,01**	331	168	163
	(100,46)	(78,54)			319	160	159
Satisfaction (Theory of Auto determination)	78,38	80,67	2,29	0,16	332	170	162
	(226,58)	(214,62)			320	162	158
Degree of Competence	21,89	22,86	0,97	0,07*	331	170	161
	(23,69)	(24,58)			319	162	157
Degree of Autonomy	25,89	26,51	0,62	0,29	331	169	162
	(27,18)	(28,65)			319	161	1158
Degree of Relationship	30,93	31,44	0,51	0,46	331	169	162
	(41,31)	(40,41)			319	161	158
Block 2 – Planned behavior and proactivity							
Employability	128,34	128,38	0,29	0,99	335	170	165
	(1258,56)	(1436,87)			323	162	161
COMOBE subscale	71,57	73,01	1,68	0,47	330	168	162
	(342,39)	(328,05)			318	160	158
Unfounded optimism subindex	32,75	34,38	1,87	0,08*	325	166	159
	(72,88)	(68,74)			313	158	155
Proactivity subindex	39,20	39,27	0,07	0,96	330	168	162
	(141,57)	(114,52)			318	160	158
ICBE subscale	41,65	40,98	-0,66	0,66	327	167	160
	(180,35)	(215,93)			315	159	156
Frequency subindex	32,80	32,64	-0,14	0,89	327	167	160
	(109,33)	(132,00)			315	159	156

	Mean				N/Clusters		
Variable	**Control**	**Treatment**	**Dif.**	**P-value**	**Total**	**Control**	**Treatment**
Organization subindex	9,01 (14,52)	8,60 (14,25)	-0,41	0,33	319 307	164 156	165 151
IFS subscale	17,10 (24,64)	17,27 (18,47)	0,17	0,73	328 316	166 158	162 158
Behavioral subindex	10,22 (10,18)	9,96 (8,37)	-0,26	0,43	328 316	166 158	162 158
Motivation subindex	6,88 (6,32)	7,36 (5,02)	0,48	0,07*	327 315	166 158	161 157
Environment's perception on working situation	15,05 (20,02)	16,16 (17,47)	1,11	0,02**	321 309	160 152	161 157
Block 3 – Employment							
Self-reported employment	0,15 (0,14)	0,19 (0,16)	0,04	0,36	311 302	156 150	155 152

Description of the performance indicators

A description of the outcomes analyzed in this study, together with information about their construction, their range, and its weight within the index, can be found in this part.

Block 1: Self-esteem and personal empowerment

Primary outcomes

- Connor-Davidson 10-item resilience scale index.
    - Sum of 10 items: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
        - I know how to adapt to changes
        - I can handle any situation
        - I see the positive side of things
        - I can perform well under pressure or stress
        - After a serious setback or unforeseen event, I usually "get back on track"
        - I manage to achieve my goals despite difficulties
        - I can maintain concentration under pressure
        - I rarely get discouraged by failures
        - I define myself as a strong person
        - I can handle unpleasant feelings

- Degree of satisfaction of basic psychological needs index (Self-Determination Theory)

- Sum of 3 subindexes (degree of competence, degree of autonomy and degree of relation), that are the secondary outcomes of Block 1.

Secondary outcomes

- Degree of competence
  - Sum of 6 items[22]: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree")
    - I often feel very competent or skilled
    - People I know tell me I am good at what I do
    - Recently I have been able to learn new and interesting skills
    - Most days I feel that I am successful in what I do
    - In my life, I have many opportunities to show how capable I am
    - I often feel less than capable
- Degree of autonomy
  - Sum of 7 items[23]: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree")
    - I feel that I am free to decide for myself how to live my life
    - I feel pressured in my life
    - I generally feel free to express my ideas and opinions
    - In my daily life I often must do as I am told
    - The people I interact with every day take my feelings into account
    - I feel that in my daily life I can be myself most of the time
    - I have many opportunities to decide for myself how to do things in my daily life
- Degree of relation
  - Sum of 8 items[24]: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree")
    - I really like the people I interact with
    - I get along well with the people I interact with on a regular basis
    - I close in on myself (isolate myself) and do not have many social relationships
    - I consider the people I interact with frequently to be my friends
    - The people around me in my life care about me
    - There are many people with whom I have a very close relationship
    - A lot of people I interact with frequently seem to like me
    - Generally, people are quite nice to me

[22] Values were inverted for the sixth item for this outcome.
[23] Values were inverted for the second and fourth items for this outcome.
[24] Values were inverted for the third item for this outcome.

Block 2: Planned behavior and proactivity

Primary outcomes

- Total employability index
    - Sum of 3 subscales (3 secondary outcomes):
        - COMOBE subscale
        - ICBE subscale
        - IFS subscale

Secondary outcomes

- COMOBE (job search behavior assessment questionnaire) subscale. Sum of the subindexes of grounded optimism and proactivity:
    - Grounded optimism subindex: sum of 3 items from self-efficacy, 3 items from successfulness and 3 items of internal locus of control. Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
        - Self-efficacy:
            - I can endure the inconveniences that come with job hunting. For example, investing time, facing an interview…
            - I can overcome rejections when I am looking for a job
            - I believe that I can behave appropriately in a job interview
        - Successfulness:
            - I believe that I will be unemployed for a short time (unemployed)
            - I have high hopes of getting a job
            - I think there is a good chance that I will end up finding a good job
        - Internal locus of control:
            - The harder I try to look for a job, the more likely I am to find one
            - Finding a job is something that will depend mainly on me.
            - Finding a job will depend on how much time I spend looking for a job
    - Proactivity subindex: sum of 4 items from divergence, 4 items from initiative and 3 items about future. Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
        - Divergence:
            - I am very confident in my ability to show my skills in personnel selections (interviews, selective tests...)
            - I am looking for work in different positions or work activities
            - I review and modify my way of looking for a job in order to get better opportunities
            - I imagine myself working in different places and with different responsibilities
        - Initiative:

- I prefer to make myself known to companies rather than wait for an offer
- I believe in taking the initiative (being active) in the job search
- I like to show that I can take the initiative in my job responsibilities
- I offer to work for companies, even if they are not looking for personnel

  - Future:
    - Before a selection, I try to foresee (anticipate) which of my skills will be of most interest to the company
    - I can guess what employers expect from me
    - I like to imagine what the selection process will be like in order to foresee possible difficulties

- ICBE (job search behaviors inventory) subscale. Sum of the subindexes of frequency and organization:
  - Frequency subindex: sum of 3 items from information, 4 items from personal management and 3 items of delayed management. Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
    - Information:
      - I ask relatives or acquaintances about job offers
      - I consult press announcements
      - I look at offers on bulletin boards
    - Personal management:
      - I visit employment offices or TEA (Temporary Employment Agencies)
      - I go to public institutions and agencies seeking employment
      - I am applying to private companies for employment
      - I consult employment experts (guidance counsellors, teachers, employers, etc.)
    - Delayed management:
      - I submit or send my resume in writing
      - I use employment websites and attend to internet offers
      - I use of social networks (Facebook, LinkedIn, etc.) to search for jobs
  - Organization subindex: sum of 3 items: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
    - I use an agenda to organize my job search
    - I plan my job search in advance
    - I dedicate certain hours of the day to job search

- IFS (insertion facilitator system) subscale. Sum of the subindexes of behavior and motivation:
  - Behavior subindex: sum of 3 items: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
    - I have all the information I need to get a job

- I regularly organize my job search
- I am proficient in job search techniques (resume writing, advertising, interviewing, etc.)

- Motivation subindex: sum of 2 items: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
  - I feel very encouraged to look for a job
  - I think I'm going to get a job soon

- Opinion of their environment regarding the need to seek/have employment subscale. Sum of 4 items: Indicate your degree of disagreement/agreement with these statements. Range: 1 ("Totally disagree") - 5 ("Totally agree"):
  - The person most important to me thinks I should look for a job
  - Most people in my close social environment think I should look for a job
  - The people in my close social environment value positively that I take the initiative in looking for a job
  - The most important person to me thinks that my life will improve if I find a job.

Block 3: Employability

Primary outcomes (administrative data)

- *Number of hours worked indicator*
- *Employment indicator*[25]

[25] As mentioned earlier in this document, administrative data from the project could not be collected at this time. Therefore, an alternative to the employment indicator is proposed. These alternative compares whether participants are employed at the end of the project relative to their baseline situation.

Results for Alternative Specifications

In this section, the results of two alternative specifications to the one presented are presented. That is, to control the baseline result and additional covariates.

Regressions without controls, or baseline results

1. Self-esteem and personal empowerment

Tables A1 through A8 present the results of a specification without initial controls or reference results. For the self-esteem and personal empowerment block, an increase of 6.45% (p<0.1) in resilience was observed for all treatment groups compared to the control group, and that this effect occurs mainly for vocational training treatment (see **Table A1**), where the effect produced in this treatment group is 13.55% (p<0.01) with respect to the control group. In addition, for the main results of block 1, an increase in satisfaction of 7.83% (p<0.05) was also observed for the second treatment group. For secondary outcomes, greater impacts are also reported for the second treatment group in terms of competence, autonomy, and relationship, with positive impacts of 7.54% (p<0.1), 7.27% (p<0.1), and 6.22% (p<0.1), respectively (see **Table A3**).

Table A1: Self-esteem and personal empowerment (main results) - No controls, no baseline results

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	2.28*		2.78	
	(1.17)		(1.81)	
Self-esteem		1.23		1.62
		(1.62)		(2.24)
Professional training		4.79***		6.02**
		(1.49)		(2.57)
Self-esteem and professional training		1.75		1.87
		(1.62)		(2.64)
Observation	308	308	309	309
R2	0.01	0.02	0.01	0.01
Control group mean	35.35	35.35	76.85	76.85
T3=T1 (p-value)		0.79		0.93
T3=T2 (p-value)		0.10		0.19
T3=T1=T2 (p-value)		0.11		0.25
T3=T1+T2 (p-value)		0.08		0.14

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A2: Self-esteem and personal empowerment (secondary outcomes) - No controls, no baseline results

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.91		0.41		0.76	
	(0.58)		(0.58)		(0.70)	
Self-esteem		0.75		0.02		0.22
		(0.75)		(0.71)		(0.90)
Professional Training		1.60*		1.58*		1.90*
		(0.84)		(0.87)		(0.99)
Self-esteem & professional training		0.60		-0.05		0.60
		(0.87)		(0.83)		(1.02)
Observation	307	307	309	309	307	307
R2	0.01	0.01	0.00	0.01	0.00	0.01
Control group mean	21.21	21.21	21.72	21.72	30.54	30.54
T3=T1 (p-value)		0.88		0.97		0.75
T3=T2 (p-value)		0.35		0.15		0.29
T3=T1=T2 (p-value)		0.58		0.22		0.31
T3=T1+T2 (p-value)		0.18		0.22		0.32

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

2. Planned behavior and proactivity

Tables A3 – A7 show the estimated effects for the interventions in the block of planned and proactive behavior with the specification. For the main outcome, an increase in the employment rate is observed in the second intervention group compared to the control group (an increase of 8.85%, with p<0.05).

For the secondary outcomes in this block, significant effects of treatments are also seen in **Tables A4 and A6**. In general, positive impacts have been obtained on the optimism and motivation sub-indices of, respectively, 6.09% (p<0.05) and 9.30% (p<0.05) for all treatment groups with respect to the control group. More specifically, for the vocational training treatment group, positive impacts were observed in the COMOBE subscale (p<0.1), optimism (p<0.1), SFI subscale (p<0.01), behavioral sub-index (p<0.05) and motivation sub-index (p<0.1), with values of 6.84%, 7.92%, 11.51%, 10.4% and 11.84% respectively compared to the control group. In addition, a significant positive effect of 7.42% and 8.7% is shown for the third intervention group in terms of optimism (p<0.1) and motivation (p<0.1), respectively.

Table A3: Planned and Proactive Behavior (Secondary Outcomes -1) - No Controls, No Baseline Outcomes

	Employability	
	(1)	(2)
Treatment (all)	5.35	
	(3.89)	
Self-esteem		2.72
		(5.29)
Professional training		11.43**
		(5.63)
Self-esteem and professional training		4.17
		(5.56)
Observation	309	309
R2	0.01	0.01
Control group mean	129.1	129.11
T3=T1 (p-value)		0.83
T3=T2 (p-value)		0.30
T3=T1=T2 (p-value)		0.39
T3=T1+T2 (p-value)		0.25

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A4: Planned Behavior and Proactivity (Secondary Outcomes - 2) - No Controls, No Baseline Outcomes

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	2.43		1.96**		0.15	
	(2.01)		(0.94)		(1.15)	
Self-esteem		1.43		1.24		-0.03
		(2.87)		(1.30)		(1.67)
Professional training		4.87*		2.55*		1.55
		(2.85)		(1.41)		(1.69)
Self-esteem professional training		1.90		2.39*		-0.61
		(2.90)		(1.27)		(1.67)
Observation	307	307	305	305	304	304
R2	0.00	0.01	0.01	0.02	0.00	0.00

	COMOBE subscale		Unfounded optimism subindex		Proactivity subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Control group mean	71.21	71.21	32.21	32.21	39.78	39.78
T3=T1 (p-value)		0.90		0.46		0.79
T3=T2 (p-value)		0.41		0.92		0.31
T3=T1=T2 (p-value)		0.58		0.67		0.58
T3=T1+T2 (p-value)		0.34		0.51		0.43

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A5: Planned Behavior and Proactivity (Secondary Outcomes -3) - No Controls, No Baseline Outcomes

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.79		0.90		0.02	
	(1.51)		(1.17)		(0.41)	
Self-esteem		-0.78		-0.63		0.09
		(2.09)		(1.63)		(0.54)
Professional training		2.96		2.05		0.85
		(2.44)		(1.88)		(0.71)
Self-esteem and professional training		1.12		1.91		-0.68
		(2.15)		(1.67)		(0.58)
Observation	306	306	306	306	302	302
R2	0.00	0.01	0.00	0.01	0.00	0.01
Control group mean	42.80	42.80	33.44	33.44	9.42	9.42
T3=T1 (p-value)		0.47		0.22		0.27
T3=T2 (p-value)		0.53		0.95		0.07
T3=T1=T2 (p-value)		0.43		0.36		0.18

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
T3=T1+T2 (p-value)		0.77		0.86		0.10

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A6: Planned and Proactive Behavior (Secondary Outcomes -3) - No Controls, No Baseline Outcomes

	IFS Subscale		Behavioral subindex		Motivation subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.86		0.16		0.62**	
	(0.53)		(0.34)		(0.26)	
Self-esteem		0.41		-0.22		0.54
		(0.72)		(0.47)		(0.34)
Formation professional		1.93***		1.06**		0.79*
		(0.72)		(0.46)		(0.42)
Self-esteem and training professional		0.64		-0.03		0.58*
		(0.71)		(0.47)		(0.34)
Observation	306	306	306	306	304	304
R2	0.01	0.02	0.00	0.02	0.02	0.02
Control group mean	16.77	16.77	10.19	10.19	6.67	6.67
T3=T1 (p-value)		0.79		0.74		0.92
T3=T2 (p-value)		0.13		0.05		0.66
T3=T1=T2 (p-value)		0.16		0.05		0.86
T3=T1+T2 (p-value)		0.13		0.24		0.20

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A7: Planned and Proactive Behavior (Secondary Outcomes -4) - No Controls, No Baseline Outcomes

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.34	
	(0.53)	
Self-esteem		0.02
		(0.69)
Vocational training		0.82
		(0.80)
Self-esteem and training		0.38
professional		(0.76)
Observation	304	304
R2	0.00	0.00
Control group mean	14.88	14.88
T3=T1 (p-value)		0.68
T3=T2 (p-value)		0.65
T3=T1=T2 (p-value)		0.68
T3=T1+T2 (p-value)		0.70

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

3. Employment

For the third block of these specifications, **Table A8** shows a negative impact on self-reported employment in Treatment group 3, where this index decreases by 23.76% (p<0.05) compared to the control group.

Table A8: Employability (main results) - No controls, no baseline results

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.05	
	(0.05)	
Self-esteem		0.03
		(0.06)

Professional training		-0.01
		(0.08)
Self-esteem and professional training		-0.19**
		(0.08)
Observation	272	272
R2	0.00	0.03
Control group mean	0.787	0.79
T3=T1 (p-value)		0.02
T3=T2 (p-value)		0.08
T3=T1=T2 (p-value)		0.06
T3=T1+T2 (p-value)		0.09

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Regressions with controls, no baseline results

1. Self-esteem and personal empowerment

Tables A9 to A16 present the results of the same regressions as in the previous section, but including as controls the unbalanced variables obtained in the balance tests.

The analysis of the first block of variables with this specification is shown in **Tables A9 and A10**, where a significant effect of 7.24% (p<0.05) is found for the resilience index in the second treatment group. However, no significant effect was found for secondary outcomes in the self-esteem and personal empowerment block with these specifications.

Table A9: Self-esteem and personal empowerment (main results) - Controls, no baseline results

	Resilience (Connor-Davidson)		Satisfaction (Theory of Auto determination)	
	(1)	(2)	(3)	(4)
Treatment (all)	0.82		1.22	
	(0.97)		(1.72)	
Self-esteem		0.09		0.38
		(1.39)		(1.95)
Professional training		2.62**		3.46
		(1.25)		(2.69)
Self-esteem and professional training		0.44		0.67
		(1.44)		(2.44)
Observation	266	266	267	267
R2	0.34	0.35	0.26	0.27
Control group mean	36.19	36.19	77.45	77.45

T3=T1 (p-value)	0.84	0.91
T3=T2 (p-value)	0.20	0.37
T3=T1=T2 (p-value)	0.25	0.54
T3=T1+T2 (p-value)	0.29	0.38

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A10: Self-esteem and personal empowerment (secondary outcomes) - Controls, no baseline results

	Degree of Competence		Degree of Autonomy		Degree of Relation	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.47		0.02		0.32	
	(0.54)		(0.58)		(0.73)	
Self-esteem		0.59		-0.36		-0.21
		(0.63)		(0.68)		(0.90)
Professional Training		0.75		0.90		0.28
		(0.87)		(0.92)		(0.99)
Self-esteem & professional training		0.13		-0.15		0.28
		(0.82)		(0.83)		(0.99)
Observation	266	266	267	267	266	266
R2	0.30	0.30	0.18	0.19	0.17	0.18
Control group mean	21.36	21.36	21.79	21.79	30.65	30.65
T3=T1 (p-value)		0.59		0.80		0.64
T3=T2 (p-value)		0.56		0.33		0.42
T3=T1=T2 (p-value)		0.82		0.43		0.45
T3=T1+T2 (p-value)		0.32		0.58		0.60

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

2. Planned behavior and proactivity

With this specification, only statistically significant effects are observed in **Table A14**. There was an increase of 8.07% (p<0.05) in the SFI sub-index for the second treatment group, and a positive impact of 10.10% (p<0.05) in the behavioral sub-index.

Table A11: Planned Behavior and Proactivity (Main Results) - Controls, No Baseline Results

	Employability	
	(1)	(2)
Treatment (all)	2.45	
	(2.99)	
Self-esteem		2.51
		(3.96)
Professional training		5.44
		(4.63)
Self-esteem and professional training		0.31
		(4.16)
Observation	267	267
R2	0.44	0.44
Control group mean	129.73	129.73
T3=T1 (p-value)		0.65
T3=T2 (p-value)		0.35
T3=T1=T2 (p-value)		0.64
T3=T1+T2 (p-value)		0.25

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A12: Planned Behavior and Proactivity (Secondary Outcomes - 1) - Controls, No Baseline Outcomes

	COMOBE subscale		Sub-index of well-founded optimism		Proactivity sub-index	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.99		1.05		-0.14	
	(1.50)		(0.76)		(0.97)	
Self-esteem		1.44		1.02		0.30
		(1.98)		(1.01)		(1.27)
Professional training		1.45		0.89		0.47
		(2.31)		(1.12)		(1.56)
Self-esteem professional training		0.14		1.18		-1.09
		(2.14)		(1.05)		(1.39)
Observation	266	266	266	266	265	265
R2	0.48	0.48	0.48	0.48	0.32	0.32

Control group mean	71.47	71.47	32.08	32.08	39.70	39.70
T3=T1 (p-value)		0.60		0.90		0.38
T3=T2 (p-value)		0.64		0.83		0.40
T3=T1=T2 (p-value)		0.84		0.98		0.61
T3=T1+T2 (p-value)		0.42		0.66		0.40

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A13: Planned Behavior and Proactivity (Secondary Outcomes - 2) - Controls, No Baseline Outcomes

	ICBE subscale		Frequency subindex		Organization subindex	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.36		0.36		0.02	
	(1.39)		(1.09)		(0.40)	
Self-esteem		0.00		-0.17		0.12
		(1.80)		(1.41)		(0.52)
Professional training		2.05		0.94		1.04
		(2.24)		(1.78)		(0.66)
Self-esteem and professional training		-0.38		0.60		-0.84
		(1.99)		(1.53)		(0.57)
Observation	267	267	267	267	265	265
R2	0.29	0.29	0.28	0.29	0.21	0.23
Control group mean	42.21	42.21	33.15	33.15	9.12	9.12
T3=T1 (p-value)		0.87		0.67		0.16
T3=T2 (p-value)		0.36		0.87		0.02
T3=T1=T2 (p-value)		0.62		0.83		0.06
T3=T1+T2 (p-value)		0.45		0.94		0.03

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A14: Planned Behavior and Proactivity (Secondary Outcomes - 3) - Controls, No Baseline Outcomes

	SFI Subscale		Behavioral subscript		Motivation sub-index	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (all)	0.42		0.10		0.28	
	(0.47)		(0.33)		(0.24)	
Self-esteem		0.33		-0.20		0.49
		(0.62)		(0.43)		(0.30)
Formation professional		1.35**		1.03**		0.29
		(0.61)		(0.43)		(0.36)
Self-esteem and training professional		-0.12		-0.19		0.03
		(0.68)		(0.47)		(0.32)
Observation	266	266	266	266	265	265
R2	0.33	0.34	0.16	0.18	0.40	0.40
Control group mean	16.73	16.73	10.20	10.20	6.58	6.58
T3=T1 (p-value)		0.57		0.97		0.21
T3=T2 (p-value)		0.05		0.03		0.52
T3=T1=T2 (p-value)		0.13		0.03		0.46
T3=T1+T2 (p-value)		0.07		0.14		0.15

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

Table A15: Planned Behavior and Proactivity (Secondary Outcomes – 4) – Controls, No Baseline Outcomes

	Environment's perception on working situation	
	(1)	(2)
Treatment (all)	0.25	
	(0.48)	
Self-esteem		-0.16
		(0.61)
Vocational training		1.06
		(0.75)
Self-esteem and training professional		0.16
		(0.61)

	Environment's perception on working situation	
	(1)	(2)
Observation	265	265
R2	0.34	0.34
Control group mean	14.64	14.64
T3=T1 (p-value)		0.64
T3=T2 (p-value)		0.26
T3=T1=T2 (p-value)		0.31
T3=T1+T2 (p-value)		0.46

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; ***p < 0.01

3. Employment

For self-reported use with this specification, no statistically significant effect is found in any intervention group, or even in all groups compared to the control group.

Table A17: Employability (main results) - Controls, no baseline results

	Self-reported employment	
	(1)	(2)
Treatment (all)	-0.01	
	(0.06)	
Self-esteem		0.05
		(0.07)
Professional training		0.06
		(0.09)
Self-esteem and professional training		-0.14
		(0.09)
Observation	238	238
R2	0.06	0.08
Control group mean	0.78	0.78
T3=T1 (p-value)		0.06
T3=T2 (p-value)		0.07
T3=T1=T2 (p-value)		0.11
T3=T1+T2 (p-value)		0.06

Note: Standard errors in parentheses. The standard errors in parentheses have been grouped at the family level since it was the unit of randomization. * p < 0.1; ** p < 0.05; p < 0.01